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Microfinance and welfare of households in Ngcobo villages in the Eastern Cape Province

A Dissertation

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of the requirements for the Degree of
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by

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ABSTRACT

This research examined the effectiveness of microfinance on welfare of rural households in Ngcobo in the Eastern Cape through an administered survey. The study targeted fifty households based on convenience sampling technique and used a number of welfare indicators but selected food consumption patterns; roof, floor and walls of the main dwelling house; cooking fuel used and transport, livestock and household appliances and electronics asset ownership patterns to derive household welfare index. The derived household welfare index of those households which have had microfinance access was then compared with that of those households that have never accessed microfinance. The general idea was that microfinance access would result in relatively higher welfare.

The study found microfinance access to have a significantly high impact t highly on household welfare index of those households that had participated in microfinance in Ngcobo. The higher household welfare index meant that microfinance beneficiaries had relatively higher protein consumption patterns, used more durable material for roofs, wall and floors of their main dwellings, had better asset ownership patterns in particular variety of household appliances and electronics.

The study also found that there are other control variable such as employment, age, household size and education that interfere with access to microfinance. Lastly, the study also found that that distance of a household from a microfinance outlet or institutions plays a significant hindrance factor in microfinance access. In other words, those households in Mjanyana and Clarkebury, which are situated within more than 40 kilometres from the microfinance institutions, had lower microfinance access.

Based on the findings, the study recommends that policy makers in the province pay attention in refining the policy to ensure that control variables identified to interfere with microfinance access do not close out the intended beneficiaries of microfinance. Also, the study recommends that policy makers and microfinance institutions be innovative in ensuring those in deep rural areas are offered the same opportunity to access microfinance within Ngcobo, despite their distance from the microfinance outlets.

ACKNOWLEDGEMENTS

Firstly, my sincere gratitude goes to my supervisor, Assoc. Prof. Latif Alhassan, for his valuable guidance and patience up to the completion of this thesis. There was a moment when I felt there was too much back-and-forth on the draft thesis and almost lost it, but he advised it was for my own good, and I owe him my everlasting appreciation for his stance.

Secondly, to all the fifty respondents that participated in my survey, thank you for opening your doors and welcoming me into homes and workplaces despite your busy schedules. Especially where there were second round visits for follow up and clarity sessions.

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Above all, Glory to the Almighty God for His countless blessings and for being with me throughout this journey. Jeremiah 29: 11. AMEN.

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ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CBD	Central Business District
CGAP	Consultative Group to Assist the Poor
GVA	Gross Value Added
GVA-R	Regional Gross Value Added
HIV	Human Immunodeficiency Virus
MFIs	Microfinance Institutions
OLS	Ordinary Least Squares
USAID	United States Agency for International Development
UNDP	United Nations Development Programme
UN/OSCAL	United Nations Office of the Special Coordinator for Africa and the Least Developed Countries

CHAPTER 1 INTRODUCTION

1.1 BACKGROUND OF STUDY

Microfinance is provision of financial services to poor and very poor self-employed people (Oreto,1999). Recognition of microfinance as a poverty tool dates as far back as 1970s, when social pioneer Muhammed Yunus turned his dream of a poverty free world into reality by making the so called poor bankable. Upon success of his model, acknowledgement of microfinance in development as an innovative tool for poverty eradication and economic empowerment spread even wider, receiving support from multilateral and bilateral lending agencies, developing and developed countries (governments), non-government organisations and private banking institutions (Asian Development Bank, 2000).

South Africa has not been an exception, as microfinance has featured prominently in South African development trajectory post 1994. Against the backdrop of high unemployment, poverty and inequality in South Africa, the democratic government adopted microfinance programme in pursuit of poverty eradication, inclusive economic growth and development. Accordingly, policies, legislation and regulations were reformed to provide a thriving and enabling environment for microfinance. These reforms institutionalised microfinance suitably for supply and demand needs of lower income households.

On the supply side, microfinance was designed to unlock capital constraints, facilitate investment, smoothen consumption over time and meet emergency liquidity needs of poor households, while on the demand side, microfinance aimed to mobilise savings from poor to earn interests on deposits. Hence, South African microfinance institutions offer credit, deposit and micro insurance financial services (products) which are deemed effective in improving households' welfare, thereby positioning microfinance at the centre of government interventions on poverty eradication.

Microfinance providers in the country include those offering small enterprise loans, cooperative financial institutions, primary banks, housing microfinance providers and salary based micro lenders, all which offer those services deemed key to alleviate poverty and improve household welfare. According to Bank Seta (2013), microfinance industry in the country has grown from less than R1 billion in 1992 to around R10 billion in 1999 and in 2013 the size of the industry was estimated to have reached R50 billion. Hence the overall profile

of microfinance sector has been described as maturing, expanding and innovating (Calvin & Coetzee, 2010).

The massive investments quantified at R50 billion in 2013 by Bank Seta not only led to diverse microfinance institutions but also increased coverage. By way of an example, Small Enterprise Finance founded in 1992 now has over 54 branches spread in the country with dedicated reach on those provinces that are poverty hubs including Eastern Cape. However, in spite of these massive investments in the microfinance sector, recent poverty statistics published in the Community Survey (2016) indicate that between 2011 and 2016 poverty has instead amplified in six of the nine provinces in the country, including Eastern Cape. This raises questions on whether the microfinance program adopted post 1994 has had any impact on household welfare of the intended beneficiaries.

1.2 RESEARCH PROBLEM

Ngcobo is a rural municipality under Chris Hani Region in the Eastern Cape, whereby a considerable number of people are living in poverty and dependent on social grants as the main source of income. Community Survey (2016) reported that 93.2% of Ngcobo population received grants as income, poverty intensity (poverty gap) increased from 41.4% to 45% while the poverty headcount decreased from 27.4% to 23.3% between 2011 and 2016. Despite the decrease in poverty headcount, these statistics place Ngcobo as the second highest in poverty intensity and third highest in poverty headcount provincially, a clear indication that poverty is rife within this region.

Currently existing empirical literature on effectiveness of microfinance on households' welfare is contradictory. Some scholars argue that microfinance and household welfare are positively related while others suggest that microfinance is ineffective as a poverty eradication tool. Furthermore, there is a dearth in existing empirical research focusing on effectiveness of microfinance in improving the welfare of households in South Africa, which is even more pronounced in the context of rural provinces such as the Eastern Cape.

On the one hand, it is inconclusiveness and scantiness in existing literature that reinforce a need for in-depth study into effectiveness of microfinance in improving households' welfare specifically in Ngcobo in the Eastern Cape. On the other, the current poverty plight facing Ngcobo region as confirmed by the Community Survey (2016) statistics, compounds the need

for research to examine microfinance subject as a thinkable policy intervention tool for poverty eradication and improved household welfare in Ngcobo.

1.3 RESEARCH QUESTIONS

Against the backdrop of a dearth in research and contradictory empirical findings on effectiveness of microfinance in improving welfare of households; the following questions remain unanswered in currently existing literature:

i. How accessing microfinance has impacted on household welfare in Ngcobo villages?
ii. What has hindered effectiveness of microfinance in Ngcobo villages?

The research questions are deemed crucial as they not only remain unanswered in existing literature, but could prove invaluable in contributing towards much-needed microfinance policy review, especially given persistently snowballing poverty in Ngcobo.

1.4 RESEARCH OBJECTIVES

The objectives of the study are to:

i. Examine the impact of microfinance access on household welfare in Ngcobo villages within the Eastern Cape and
ii. Identify challenges to effectiveness of microfinance in Ngcobo.

The study will test a hypothesis as follows:
Null Hypothesis: Access to microfinance has no impact on household welfare in Ngcobo municipality in Eastern Cape

Alternative Hypothesis: Access to microfinance has positive impact on household welfare in Ngcobo municipality in Eastern Cape.

1.5 LIMITATIONS OF STUDY

The study will be limited to five administrative areas or villages under Ngcobo Municipality, which will be easily accessible for survey administration and are familiar to the researcher instead of the entire Chris Hani district. This will also reduce the costs of visits to the study area during field trips to the respondents. The research is also limited to a total of fifty household respondents as a time, cost and quality measure. Furthermore, the complexities

presented by the fact that there is no single and simple way in which to measure household welfare, will limit research investigation to individuals and households' microfinance impact assessment. Therefore, in this research paper will exclude community wide impact assessment as it is deemed intricate, the exclusion which is considered a limitation of the study. Despite these cited limitations, due diligence and precaution will be ensured to invalidate their effects on the overall quality of study findings.

1.6 JUSTIFICATION OF STUDY

South Africa failed to meet most of its millennium development goals, particularly the one relating to poverty in 2014. Moreover, poverty in six of the nine provinces (except Northern Cape, Western Cape and Free State) nationwide has instead amplified, making poverty the nation's distress. Poverty is not only an urgent policy matter nationally, but more so for provinces like Eastern Cape where poverty intensity has proven resolute. This research paper is an attempt at providing valuable insights to contribute to the much needed microfinance program design enhancements for attention of provincial government policy makers and development practitioners.

Furthermore, it is anticipated that findings of this study will also be useful for future studies seeking to uncover what variations in implementation of policies are necessary to result in competitive microfinance institutions within the Eastern Cape. Lastly, the study will give useful insights on identified hindrances to effectiveness of microfinance for key industry players. It can thus be reasoned that the study will contribute towards the body of knowledge required to bridge the gap on assessing microfinance effects for the benefit of rural households in the province and beyond, microfinance industry and provincial policy makers.

1.7 ORGANISATION OF THE STUDY

The research paper will entail structured discussions under five distinct subdivisions as follows:

i. Chapter 1: An introduction to the research proposal topic, rational for the study, research questions and objectives;
ii. Chapter 2: Literature review on the topic which will be in three subsections (evolution of microfinance, definition of concepts and empirical literature review);

iii. Chapter 3: Methodology used in conducting the research highlighting research design sources and type of data, population and sampling, data collection, questionnaire design, data analysis as well as definition and measurement of variables;

iv. Chapter 4: Discussions of empirical findings (providing answers to research questions) and lastly

v. Chapter 5: Conclusion and recommendations to provincial policy makers, microfinance institutions, and development finance institutions as well as future research papers.

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION

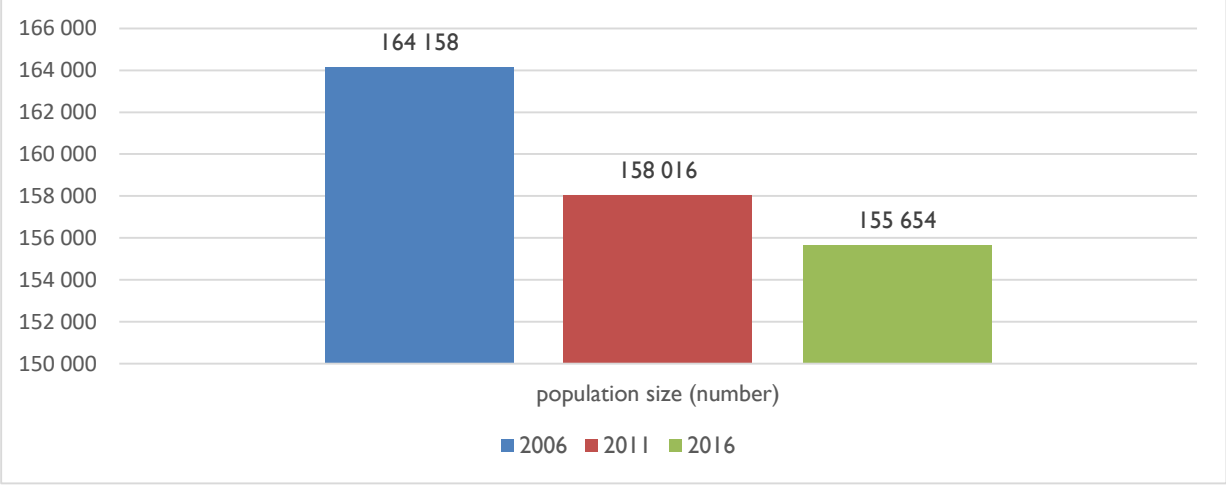
This chapter reviews literature on microfinance and its effectiveness as a poverty eradication tool. Literature review is undertaken in four parts considered relevant to the study's main objective of investigating effectiveness of microfinance to households' welfare in Ngcobo in the Eastern Cape. Firstly, socio-economic indicators of Ngcobo as a research setting are outlined, in order to contextualise the importance of the need to implement microfinance programme effectively. Secondly, literature review narrates the evolution of microfinance and the two approaches to microfinance. Thirdly, key concepts namely poverty, microfinance, microfinance institutions and household welfare are defined. Lastly, existing and contradictory empirical literature on impact of microfinance is reviewed.

2.2 NGCOBO SOCIO-ECONOMIC INDICATORS

This section discusses shifts in socio-economic indicators of Ngcobo local municipality between 2006 and 2016, in order to show why microfinance is crucial in this locality. Specific socio-economic indicators discussed include population dynamics (population trends, average households' sizes and population density, HIV and AIDS prevalence and education levels); service delivery levels (electricity, water, sanitation, refuse and types of dwellings); poverty headcount and gap; labour trends (absorption, unemployment and labour force participation rates) and lastly, economic size and regional contribution to gross value add.

2.2.1 POPULATION DYNAMICS

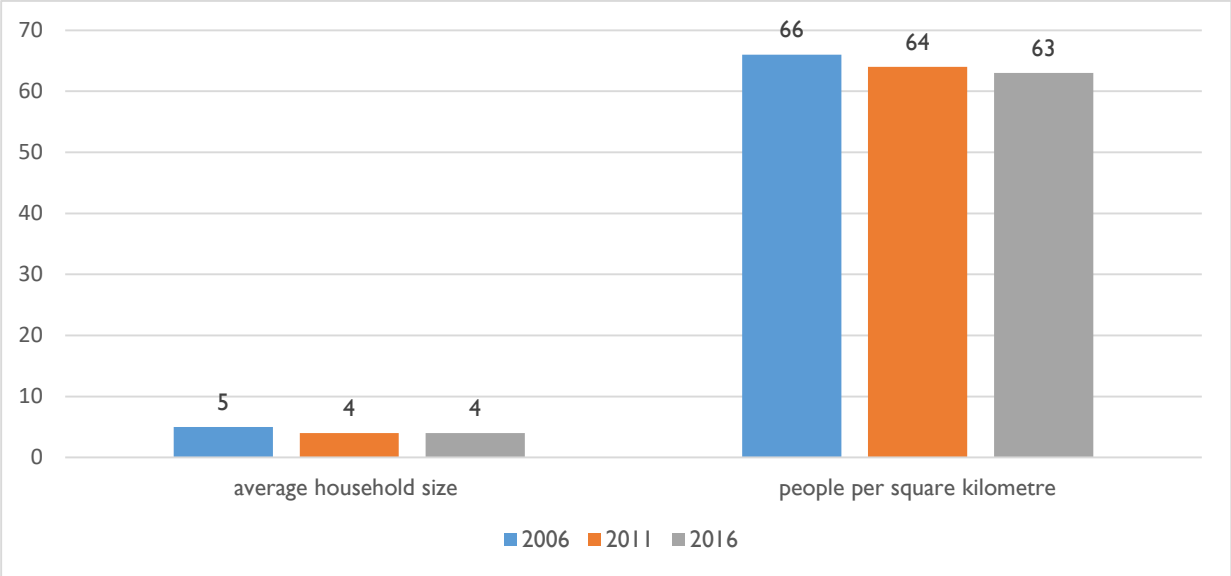
Figure 1:Ngcobo Population Size Trends



SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

Eastern Cape provincial population size has declined by an annual average rate of 0.1% since 2006, which has seen the province lose its historical third largest position to become fourth in terms of population share after Gauteng, KwaZulu-Natal and Western Cape. Defined as the total number of inhabitants or people in a specific region, the population size of Ngcobo local municipality has likewise declined by an average rate of 5.2% from 164 158 in 2006 to 155 654 people in 2016 (see Figure 1 above).

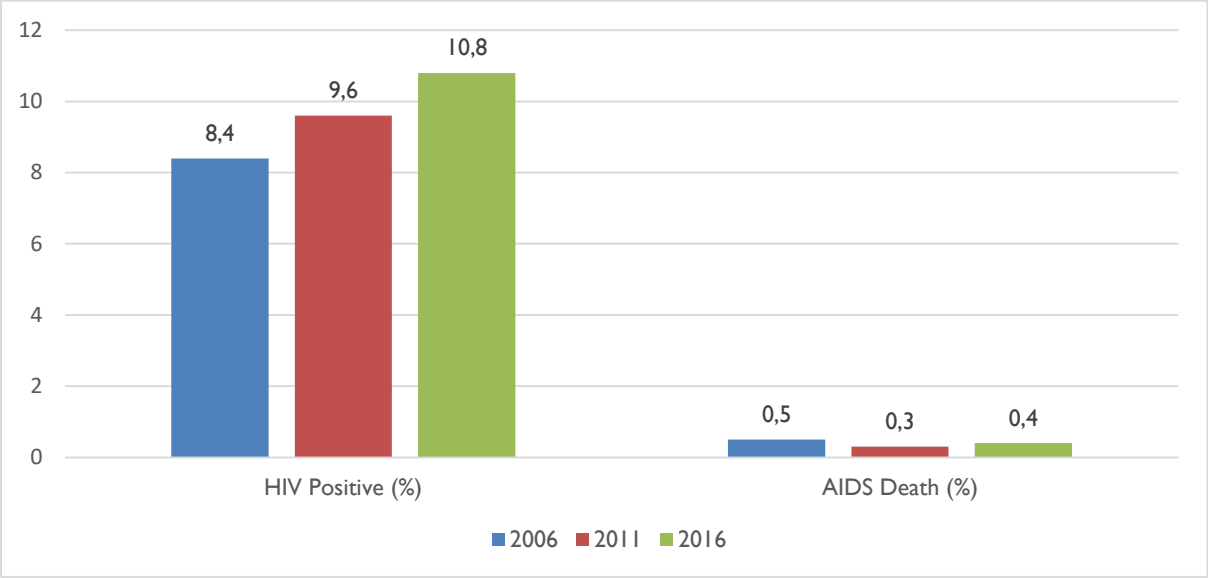
Figure 2:Household Size and Population Density Trends in Ngcobo



SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

As a consequence of the declined population size in Ngcobo local municipality, both average households' size and population density have also decreased. Average households' sizes have decreased from five (5) family members in 2006 to four (4) in 2016, with population density declining from 66 to 63 people per square kilometre in the same period. Overall the shrink in population size and density both in the Eastern Cape and Ngcobo region is reason for concern as the negative net migration adversely affects the provincial equitable share as well as economic activity, a reason why microfinance contentedly becomes a critical policy intervention.

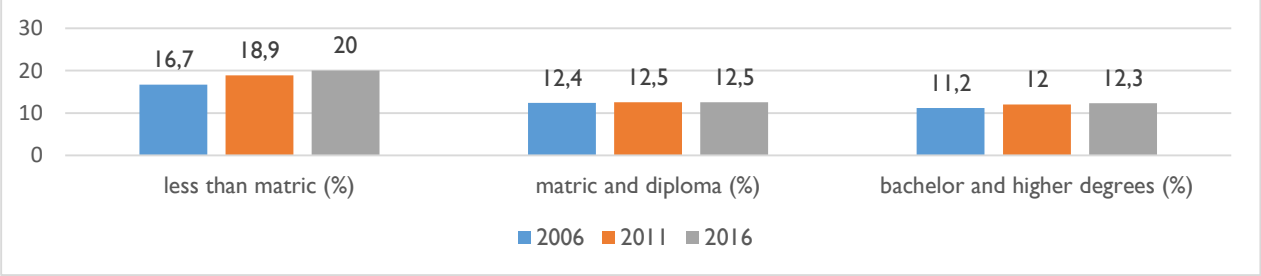
Figure 3: HIV Positive and AIDS Deaths in Ngcobo



SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

Given their impact on the population size, an equally important population dynamic to note is HIV positive and AIDS deaths trends in Ngcobo region between 2006 and 2016, Figure 3 above shows these trends. There has been as simultaneous increase and decline of the same in Ngcobo in the period under review. While the number of people living with HIV increased from 8.4% in 2006 to 10.8% in 2016, the percentage of Ngcobo population dying from AIDS slightly decreased from 0.5% of population to 0.4% in the decade under review.

Figure 4: Population Levels of Education in Ngcobo



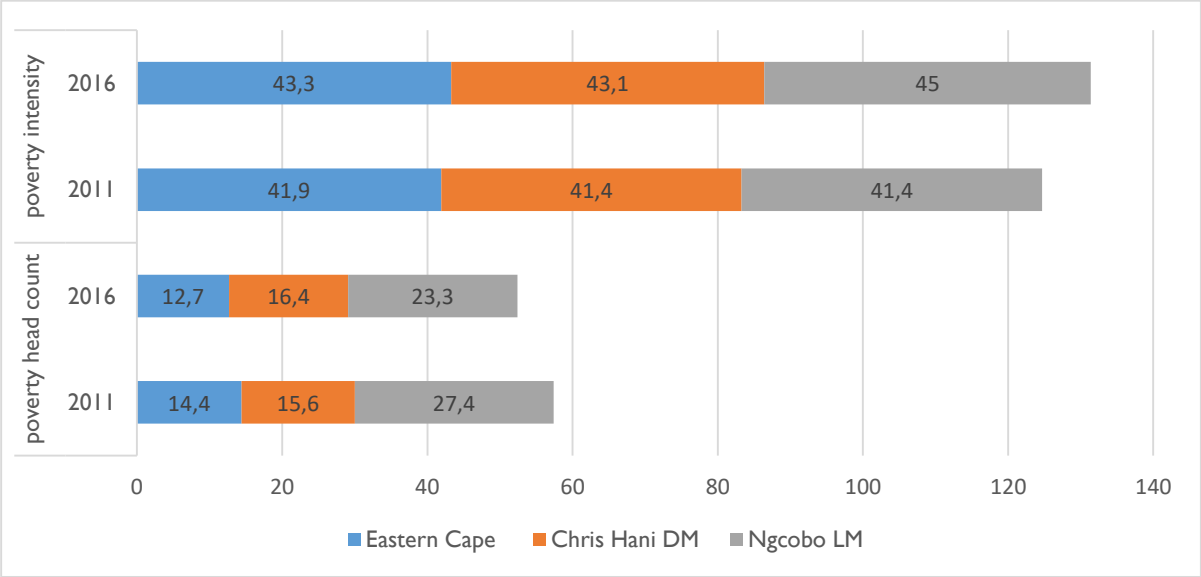
SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

The last population indicator for discussion is population levels of education, which tracks trends in population with less than Matric, Matric (Grade 12) and diplomas as well as bachelor and higher degree'. This is particularly important as education or lack thereof is a commonly cited root cause of unemployment and poverty. On the positive side, Figure 4 shows that proportion of Ngcobo population with bachelor and higher degrees increased from 11.2% in

2006 to 12.3% in 2016. Furthermore, there was a slight increase in people with Matric and Diploma from 12.4% to 12.5% between 2006 and 2016. However, it is worrisome that the number of people with education levels lower than Matric also increased from 16.7% to 20% in the same period, as these increases imply difficulties of absorbing these people in employment.

2.2.2 POVERTY INTENSITY AND GAP

Figure 5: Poverty Intensity and Headcount in Ngcobo



SOURCE: STATISTICS SOUTH AFRICA, COMMUNITY SURVEY PUBLICATION, 2016

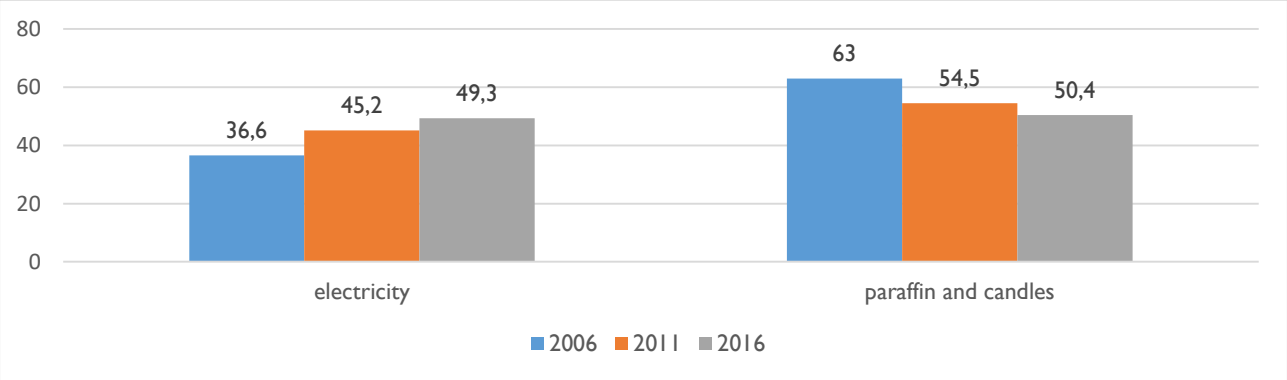
Poverty headcount measures the proportion of population living below poverty line while poverty intensity reflects the extent to which the income of the poor lies below the poverty line (also known as poverty gap). While there has been a decline in poverty headcount in the Eastern Cape between 2011 and 2016 from 14.4% to 12.7%, it however remained the highest in the country. On the other hand, poverty intensity in the province amplified from 41.9% to 43.3%. Looking at the Chris Hani District Municipality, both poverty headcount and intensity increased between 2011 and 2016, rating this area high on poverty prevalence in the province. As a consequence, Ngcobo local municipality has equally rated second in terms of poverty intensity, following an incline in the same from 41.5% to 45% between 2011 and 2016. These statistics have been a contributing factor in identifying this research need, more so as microfinance could be the required intervention tool.

2.2.3 SERVICE DELIVERY IN NGCOBO

This area discusses access to energy for lighting, water, type of toilets facilities and dwelling types as they relate to household welfare which is crucially linked to the research objectives. While overall, there seems to have been improvements in access to electricity, piped water, sanitation and more durable dwellings in Ngcobo, household welfare remains deprived, which reinforces the need for an intervention tool in the form of microfinance programme.

2.2.3.1 SOURCE OF ENERGY FOR LIGHTING

Figure 6: Access to Energy for Lighting

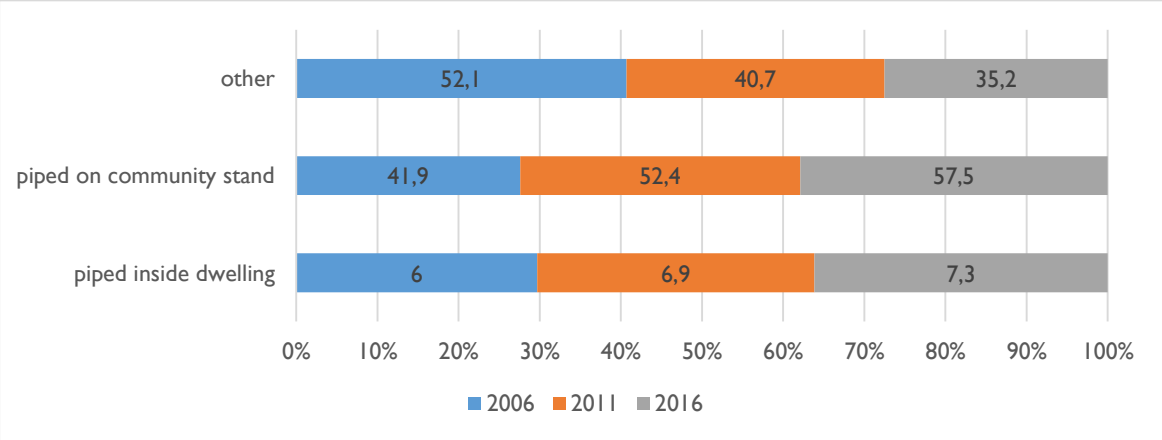


SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

There has been an improvement in access to energy for lighting in Ngcobo, seen in the increase of proportion of households with electricity over time from 36.6% in 2006 to 49.3% in 2016. This has been accompanied by a decline in number of households using paraffin and candles for lighting from63% in 2006 to 50.4% in 2016.

2.2.3.2 ACCESS TO WATER

Figure 7: Household Access to Water

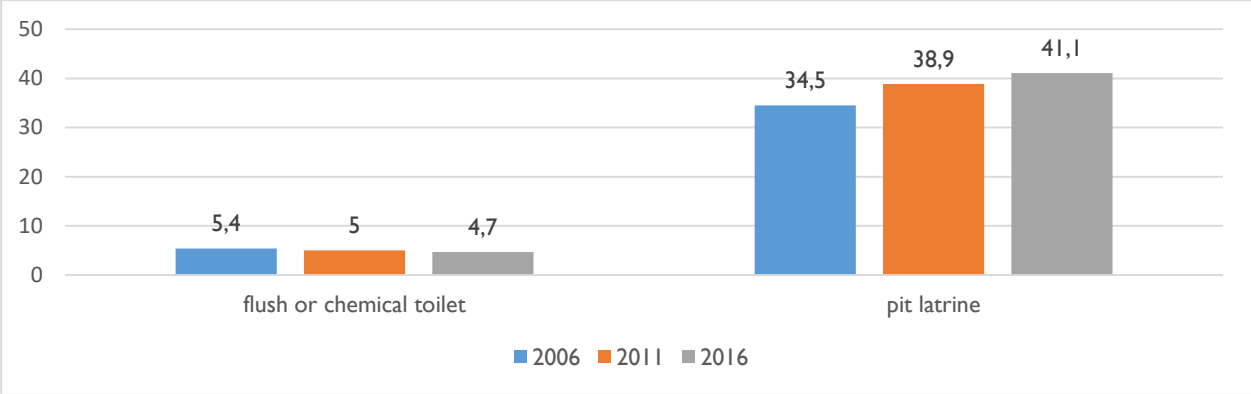


SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

There has been an improvement in household access water in Ngcobo, seen in the increase of proportion of households with piped water inside the dwelling over time from 6% in 2006 to 7.3% in 2016, as well as increase in piped water on community stands from 41.9% to 57.5% in the same reporting period. This has been accompanied by a decline in other unsafe sources of water such as rivers and dams from 52.1% in 2006 to 35.2% in 2016. However, it must be noted that slower service delivery in access to piped water inside dwellings has been slower compared to community stands, suggesting a rather concerning trends in welfare in the region.

2.2.3.3 TOILET FACILITY

Figure 8: Household Access to Toilet Facility

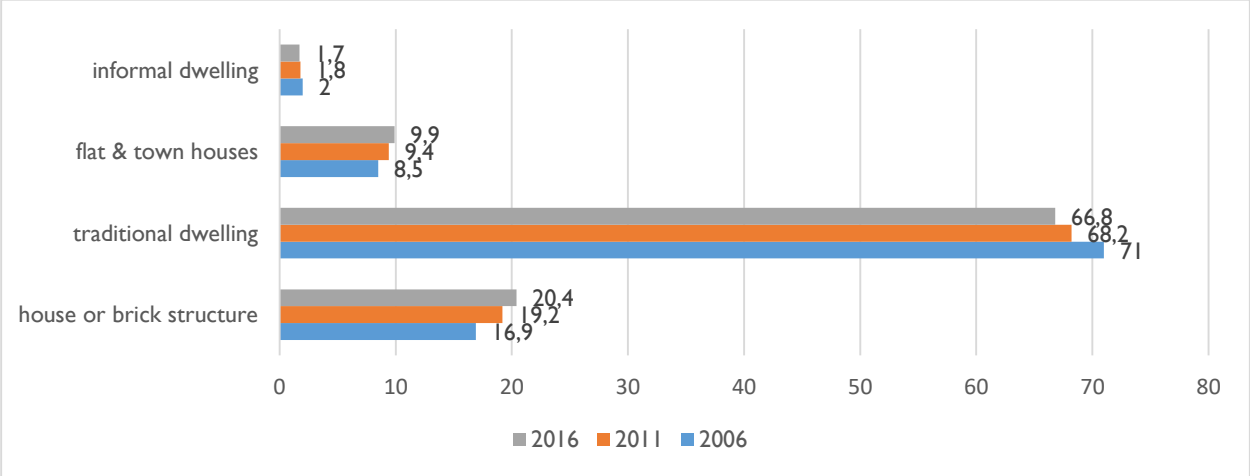


SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

In contrast to improvements in other services, there has been regression in household access to toilet facilities between 2006 and 2016. This is seen in the increase in solid toilet facilities in the form of pit latrines from 34.5% to 41.1% and a decrease in liquid sanitation from 5.4% to 4.7% in the period 2006 to 2016.

2.2.3.4 DWELLING TYPE

Figure 9: Household Access to Dwelling Type

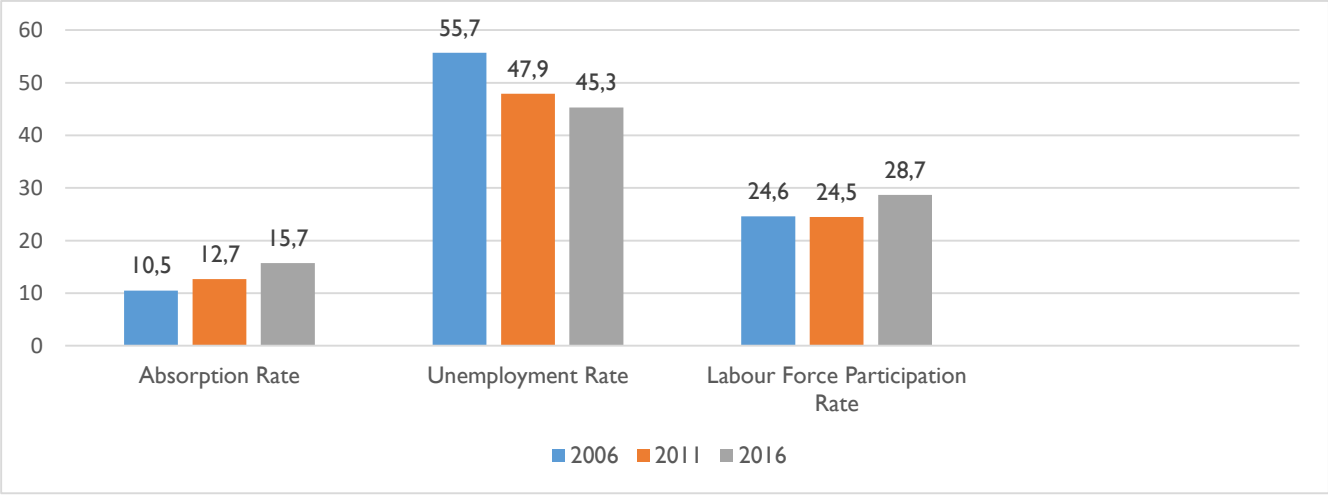


SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

There has been an improvement in household access to dwelling type in Ngcobo in the period 2006 to 2016. This has been shown in increases in houses or brick structures (from 16.9% to 20.4%) and flats and town houses (from 8.5% to 9.9%); as well as a decline in both traditional (from 71% to 66.8%) and informal dwellings (from 2% to 1.7%) over time.

2.2.4 LABOUR MARKET TRENDS

Figure 10: Ngcobo Labour Market Trends



SOURCE: COEGA DEVELOPMENT CORPORATION PUBLICATION, 2018

Unemployment remains a crucial challenge in the Eastern Cape, as the province has persistently had the highest unemployment in the country. Unemployment within the province is even more pronounced in non-metro regions such as Chris Hani District, under

which Ngcobo local municipality falls. There have been positive developments in labour market trends in Ngcobo, demonstrated in Figure 10 above, which are increase in both employment absorption and labour force participation rates over the period 2006 and 2016, as well as decline in unemployment over time from 55.7% to 45.3%. However, at 45.3%, unemployment in the Ngcobo region remains way above the Eastern Cape provincial average. Likewise, the absorption rate has been slower than needed, in fact it has been outpaced by labour force participation increases over time.

2.2.5 ECONOMIC SIZE AND CONTRIBUTION

Chris Hani District, under which Ngcobo municipality falls, has one of the smallest economies in the Eastern Cape, accounting for only 7.7% of the total provincial GVA in 2016. This was equivalent to a total GVA-R of R20.3 billion for the district in 2016, according to the Coega Development Corporation Publication of 2018. Necessarily, Ngcobo local municipality's GVA share in the Chris Hani District has increased from 9.8% in 2006 to 10.1% in 2016.

2.2.6 SUMMARY

Broadly, the above discussed socio-economic indicators cover the key dimension of welfare, namely health, education, living standards and economic activity in Ngcobo. What is clear is that firstly, HIV is increasingly becoming rampant, as there were new infections between 2006 and 2016. This slightly gives an idea of one of the diseases causing mortality in Ngcobo. Secondly, the current education trends showing an increase in those with below Matric education levels while Matric and beyond are stagnant is also a cause for concern. This is even more pronounced with the increasing poverty intensity in the region. The likelihood therefore is that majority of population (with less than Matric) will remain trapped in poverty as they already fall within the unemployed population.

Thirdly, looking at service delivery levels and trends, it is clear that living standards in the region are also deprived. This is shown by the fact that majority of the region population have solid sanitation, rely on communal stands for water supply and still use other alternatives of energy as electrification levels were still below 50% in 2016, as well as slow growth of formal dwellings. Lastly, economic activity is also not booming as indicated by high unemployment levels and low employment absorption and labour force participation rates. More so, as the size of the economy or its growth is outpaced by population growth over the time period analysed. These socio-economic indicators clearly indicate that household welfare in Ngcobo

is still hard-up, which reinforces the necessity of intervention programmes such as microfinance.

2.3 EVOLUTION OF MICROFINANCE

Microfinance originated as far back as the 1970's, developed in the 1980's and took off in the 1990's. Starting in the 1970's, scattered institutions in different parts of the world began to develop and implement microfinance programmes. Though the programmes differed somewhat, underlying principles were similar and sought to provide financial services to the poor (Robinson, 2001). The early models of microfinance were premised on the poverty lending approach and influenced by vision of a social pioneer Mohamed Yunus. Mohammed Yunus conceptualised the Grameen Bank to get people of Bangladesh out of great poverty and inhuman living conditions. The key issue for Yunus was to make the poor bankable, by amongst others, maintaining interest rates as low as possible and relying on subsidies in order to grant the poor maximum financial space for reinvestments.

Successful outcomes of the Grameen Bank model led to adoption of microfinance as a common policy tool for poverty eradication around the world, and particularly in many developing countries (Hollis and Sweetman, 1998; Gibbons and Meehan, 2002). However, the poverty lending approach which was the basis of the Grameen Bank required large amounts of continuous subsidies and proved to be a globally unaffordable model. This has since necessitated a transition from the poverty lending to commercial or financial microfinance programs. As such, in the late 1980's and 1990's microfinance models evolved towards financial systems approach, whose emphasis is on self-sufficiency of microfinance institutions.

Despite the differences between these two microfinance approaches, both continue to share the common goal of providing financial services to the poor throughout the world. There is thus general consensus on what microfinance offers and who it targets. Today, microfinance is globally recognised as a poverty eradication measure, an economic empowerment and development tool. Further, global pro-development organisations such as the United Nations, the World Bank, International Monetary Fund and others have also supported and encouraged the use of microfinance as a tool to reduce poverty and promote development (Wamaitha, 2013). Elevation and universal acceptance of microfinance is also evident in how the programme has now become central in meeting the Sustainable Development Goals.

Since the 1990s, microfinance has been marked by major debate between two leading approaches, the financial systems approach as well as poverty lending approach. Poverty lending approach focuses on reducing poverty through credit and other services provided by institutions that are funded by donor and government subsidy and other concessional funds (Robinson, 2001). The primary goal of poverty lending approach is thus reaching the poor, especially poorest of the poor with credit. As a consequence, there are three assumptions upon which the poverty lending approach was built.

Firstly, this approach assumes that poor are not credit worthy, and thus cannot afford or are unable to repay credit at commercial rates. Secondly, poor cannot afford or are unwilling to save, and those who do save prefer non-financial platforms as they do not trust banks and formal institutions. Thirdly, it assumes that the poor need technical assistance, otherwise credit would be of little productive use when not complemented with financial or business training that teaches the recipient how to maximise use of the loan. Institutions using this approach thus provide micro credit to poor borrowers at low cost. However, these institutions are typically not sustainable because interest rates on loans are too low for full cost recovery (Robinson, 2001).

In contrast, three key assumptions upon which the financial systems approach is built are firstly, that there is extensive demand for microcredit existing at rates commercial providers need to charge to fully recover cost. Secondly, massive demand for institutional voluntary savings exists amongst the poor, as they already save in one form or the other. Thirdly, demand for microfinance can only be met by sustainable institutions. This is why therefore the financial systems approach focuses on commercial financial intermediation amongst poor borrowers and savers, with emphasis being on institutional self-sufficiency. This is the main difference from poverty lending approach.

Furthermore, the importance of institutional self-sufficiency to financial systems approach renders it inappropriate for extremely poor but instead caters for economically active poor. In fact, if one considers the objectives of microfinance as a programme for the poorest of the poor, it can be reasoned that poverty lending approach is a better suitable model, precisely because the importance of self-sufficiency to financial systems approach dilutes the main intentions of microfinance as a poverty eradication policy tool for the poorest of the poor.

2.4DEFINITION OF CONCEPTS

2.4.1POVERTY

The World Bank (1990) defines poverty as the inability to attain a minimum standard of living; while the United Nations Development Programme (1998) defines it as lack of ability to participate in national life, most especially the economic sphere. However, one can classify both definitions as vague, precisely because they do not assign an explicit quota, level or extent at which these inabilities are to be classified as poverty. Klugman (2002) correctly stated that "there should be some sort of minimum that is universally accepted in societies as the reflection of individuals in poverty. A minimum standard poverty line would be useful in defining universal consensus on what barely able to survive entails and more importantly would be explicit on what and how microfinance as a poverty reduction tool would conquer such a struggle or bleak survival.

In the absence of a single definition suitable to measure all facets and dimensions of poverty, different developing countries use different quotas and merits to define poverty. South African government uses both monetary and non-monetary metrics to define poverty. In monetary metrics, three lines are used to define poverty: the upper bound, lower bound and food poverty lines. As at 2016, Statistics South Africa reported upper bound poverty line, lower bound poverty line and food poverty line at R992, R647 and R441 respectively. In the non-monetary dimensions, four indicators are used to measure poverty, namely health, education, living standards and economic activity.

In relation to health, the key indicator is child mortality, while in education it is years of schooling. Living standards are determined by access to basic services (water, sanitation, electricity and refuse removal), dwelling type and assets. The most crucial indicator for determining economic activity is employment, or lack thereof. The non-monetary elements used to measure poverty in South Africa resonate well with how Hemmer (2000) defines poverty; as a lack of sufficient assets and income to satisfy basic human needs for food, water, shelter and clothing. Hemmer (2000) goes further to define poverty as a lack of education, skills and tools to acquire income and assets. What is glaring in this definition is the element of deprivation, vulnerability and inability for one to change their poverty stricken plight;

befitting reasons why governments in developing countries deemed it necessary to intervene by adopting microfinance as a tool to eradicate poverty amongst the poor.

2.4.2 MICROFINANCE

There are various definitions of microfinance across literature. Oreto (1999) simply defines microfinance as provision of financial services to poor and very poor self-employed people. In concurrence, Schreiner and Colombet (2001) define microfinance as "the attempt to improve access to small deposits and small loans for poor households neglected by banks". The United Nations (2005) defines microfinance as loans, savings, insurance, transfer services, micro-credit loans and other financial products targeted at low–income clients.

On the other hand, Robinson (2001) offers one of the most comprehensive definitions of microfinance, defining it as small-scale financial services for both credits and deposits that are provided to people who farm or fish or herd; operate small or micro enterprises where goods are produced, recycled, repaired or traded; provide services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, draft animals or machinery and tools; and other individuals or local groups in developing countries in both rural and urban areas.

An interesting definition of microfinance in the African context is offered by National Youth Development Agency (2012), as "provision of products and services to people with low incomes who, by virtue of their social and economic status are excluded from conventional financial institutions". What literature offers as equally important in the African context, are the principles upon which a successful microfinance model should be based. The United Nations Office of Special Coordinator for Africa and Least Developed Countries (UN/OSCAL) highlighted these four principles as pooling together people's resources through groups; relying and building upon what people know (tradition); empowering African private sector (micro) and striving for operational efficacy (Sheraton, 2004).

While seeking to define microfinance in African context, it is important to acknowledge that this definition is by no means different to these other definitions of microfinance. Similarly, the principles offered by UN/OSCAL upon which successful microfinance models need to be grounded in African context are not only unique to Africa. For instance, operational efficacy

is no particular exception to Africa as it has since been globally adopted in the new microfinance era. It can thus be concluded that there has always been a general consensus across all economies and regions on what products or services as well as target groups are central to microfinance.

Whether simply or broadly defined or contextualised in developed or African context, there are two common characteristics featured in definitions of microfinance. Most of these definitions settle on what microfinance entails, and that is provision of credit, deposit and micro insurance by microfinance institutions. In this regard, this research study seeks to stress size of offerings as a crucial dynamic and would thus define microfinance as small transactions, whether loans, savings or insurance as offered by microfinance institutions.

The second common microfinance characteristic that these definitions come to an agreement on, is the target or focus group, precisely those economic agents with constrained access to formal banking services, otherwise so called "poorest". Furthermore, other additional characteristics deemed crucial in defining microfinance are market level or affordable interest rates (a distinction from loan sharks) and simple application processes (as opposed to the commercial banks). Again in this regard, this paper will highlight how those defined as poor in the South African context, have been impacted by microfinance in Ngcobo region, which is the study area.

2.4.3 MICROFINANCE INSTITUTIONS

Bouman (1995) defines microfinance organisations as "semi-formal institutions that often use social collaterals through group-lending contracts in order to reach poor individuals and households". He goes further to assert that microfinance organisations build on models that have been used among the poor for ages in informal institutions, such as rotating credit and saving clubs, in order to accumulate money for a particular reason (1995). Brennan (2008) concurred on some aspects of Bouman's definition and distinctively stated that microfinance institutions (also known as MFIs), offer financial services to undeserved, impoverished communities. He goes further to list MFI services to include savings accounts, insurance, health care and personal development. In the context of South Africa, there are various microfinance providers. Calvin and Coetzee (2010) categorise microfinance institutions in South Africa into six broad groups namely primary banks; alternative banks such as African Bank, Capitec Bank,

Teba Bank, Postbank, and WIZZIT Payments Limited; cooperative financial institutions; salary-based micro-lenders; retail development finance institutions and not-for-profit microenterprise lenders. It can be concluded that microfinance providers in South Africa are indeed diverse.

Notwithstanding these diverse microfinance providers in South Africa, this research paper takes a deliberate exclusion of those informal institutions or arrangements engaged in informal money lending and collection in its definition of microfinance institutions. This is because practises of such institutions often go against and overthrow the good intentions behind introduction of microfinance institutions and their services in the country. Furthermore, in the context of this paper three main offerings provided by financial institutions that will be investigated include lending (loans), saving and insurance products and services that seek to meet the needs of poor people.

2.4.3.1 APPROACHES TO MICROFINANCE INSTITUTIONS

Literature cites reasons why microfinance institutions target the poor. According to Menon (2005) lack of collateral is the main disqualifying reason that poor faced against traditional banks, a reason therefore why microfinance targets poor individuals as they have no assets to be offered as guarantee. Although not necessarily apart to lack of collateral, Christen et.al (2004) however allude to a general lack of access to traditional banking and related services as the main reason microfinance targets low-income clients and the self-employed.

The presupposition underpinning models, approaches, paradigms or theories of microfinance institutions is that the main problem the poor face is lack of access to credit and capital, therefore providing them access to small amounts of loans enables the poor to escape poverty and invest in businesses. Three key approaches at the centre of microfinance institutions are intuitionists, welfarists and poverty alleviation theory.

2.4.3.1.1 INSTITUTIONIST APPROACH

The institutionists argue that in pursuit of poverty alleviation mission, microfinance institutions should also endeavour to be sustainable and self-sufficient, a stance echoed by Woller et al. (1999) and Morduch (2000). Moving away from the 1980s subsidy-reliant Grameen Bank model developed by Professor Mohammed Yunus in Bangladesh, the new era microfinance models are underpinned in sustainability. The sustainable microfinance institutions' model has

since been replicated in various developing countries. Consequently, since the mid-1990s, models of microfinance promoted by most donor agencies and the Best Practice guidelines promoted in publications by USAID, World Bank, UNDP and CGAP are underpinned in the instuitionists' approach of sustainability and self-sufficiency (Mayoux,2005).

Because institutionists' approach emphasises financial self-sufficiency and non-subsidisation of the financial institutions that serve these clients who were underserved or not served at all, Matomela (2016) therefore labels the institutionists' approach as a 'financial system' and predicts that in future microfinance will be dominated by numerous large-scale, profit seeking financial institutions. In essence, institutionist approach to microfinance institutions falls under the emergent financial systems approach that serves the so called economically active poor.

2.4.3.1.2 WELFARIST APPROACH

In stark contrast to the institutionists' approach, the welfarist approach posits that microfinance institutions should not focus on sustainability but rather outreach and poverty alleviation, both of which are the main mission of microfinance programmes anyway. Welfarists' are of the opinion that the attainment of sustainability would be at the expense of the outreach to the poorest of the poor (Morduch, 2000). Welfarists are thus less interested in banking, and more interested in the use of financial services as a means of alleviating poverty. It can thus be reasoned that this approach is explicit in supporting the improvement of the wellbeing of its participants and falls under the poverty lending approach to microfinance. Welfarists' objective is therefore self-employment of the poor, especially women. One of the welfarist assumptions is that increases in income will empower women and improve the conditions of life for them and their children.

2.4.3.1.3 POVERTY ALLEVIATION APPROACH

In addition to the two renowned approaches, another emergent approach to microfinance is poverty alleviation theory. While in contrast to institutionist approach, poverty alleviation theory leans more towards the welfarist approach as it is also more concerned with individual and household livelihood and sustainability. The difference is that it extends beyond building sustainable livelihoods but sustainable communities also.

Poverty alleviation is defined to simultaneously encompass decreasing vulnerability while increasing capacities and choices of poor people. Hence the focus of poverty alleviation theory

is on decreasing household vulnerability, developing sustainable household livelihoods and community development, yet another type of poverty lending approach. The main difference from the welfarist approach is that the poverty alleviation theory underlines many non-government organisations' integrated community development programs; of which microfinance is part of Kamau (2012). This is why poverty alleviation theory is therefore also considered as providing meaningful contribution to approaches on microfinance institutions.

2.4.4 HOUSEHOLD WELFARE

Schrieder and Sharma (1999) simply define welfare as a state of a person's well-being. In the South African context, there are four non-monetary dimensions used to measure and classify household welfare or poverty, namely health, education, living standards and economic activity. For each of these four dimensions, there are key indicators falling within each, used to measure household welfare namely child mortality; years of schooling, access to basic services, dwelling type and assets; and economic activity. In essence, adoption of microfinance as a poverty alleviation tool in South Africa was meant to improve any of these dimensions.

While literature offers numerous ways in which microfinance impacts well-being of its intended beneficiaries, the bone of contention lies in how best to measure this impact. Morduch (1995) suggested that a quantitative model to analyse impact of financial services on poverty levels must include statistics on income levels, assets and institutional performance. World Bank (2003) also documented that it is possible to measure individual welfare using such factors as income and assets owned by an individual. However, the World Bank (2003) argued that assessing the relative well-being of an individual without considering the conditions of an entire household provides but a distorted view of their poverty. This is because an individual's wealth is shared with and influenced by the household in which that individual lives.

In line with this argument, the World Bank (2003) offered a more resounding poverty assessment tool to measure household welfare. This broad poverty assessment tool entails three attributes which are food, dwelling and asset related. In relation to the food-related attribute, strong indicators of wellbeing or vulnerability are household eating patterns; regularity and frequency of food intake (including days with no meals), specific food types consumption and extent of purchasing food. Indicators such as size of the house, durability of materials used in construction and basic services' facilities associated with the dwelling and

ownership status are used to determine dwelling related aspects of a household. Lastly, asset related indicators measure accumulation of assets, which is predominantly influenced by household income levels. The assumption is that poorer households only have enough for basic needs and little extra for durable assets.

While it can be conceded that there is no single way to measure the impact of microfinance, it is clear that indicators need to be inclusive of both monetary and non-monetary elements relevant to the socioeconomic environments of individuals and households post participating in microfinance. In other words, a more comprehensive measure of impact needs to consider objective and subjective socioeconomic elements as only a combination of these would be most reflective of whether objectives of microfinance as a poverty alleviation or intervention tool have been met. This is why this research paper will rely on the World Bank poverty assessment tool comprising all three attributes namely food, dwelling and asset to measure effectiveness of microfinance in Ngcobo.

It is important to mention that these attributes are by no means exhaustive, particularly in the context of South African non-monetary dimensions of measuring household welfare. In fact, to a larger extent they largely reflect indicators within the living standards dimension. This is why other dimensions such as economic activity and educational profile of a microfinance recipient, amongst others will also be considered in assessing impact of microfinance in the study area, that is the Ngcobo region. While Hulme (2000) proposed that microfinance beneficiary impact assessment should simply focus on analysis of outcomes at individual, household, enterprise or community level, it must be highlighted that this research will exclude community wide impact assessment, as it is deemed intricate but will rather limit microfinance impact analysis to individual and household welfare.

2.5 EMPIRICAL LITERATURE REVIEW

Notwithstanding general recognition of microfinance as a poverty eradication policy tool, currently existing empirical literature on its effectiveness on households' welfare is conflicting. Some researchers argue that microfinance and household welfare are positively related, while others suggest that microfinance is negatively related or ineffective to household welfare. Studies finding positive microfinance effects present empirical evidence that microfinance access has income effects. These include studies by Versluvysen (1999), Morduch and Hashemi

(2003) and CGAP (2003), all commonly reasoning that as being able to borrow a small amount of money assists in bridging cash-flow gap, a first step in breaking the cycle of poverty.

Furthermore, other studies found that microfinance does not only allow poor households to increase income only, but also to protect and diversify their sources of income. Amongst others, Robinson (2001), Midgley (2008), Otero (1999) and Bateman (2010) presented empirical evidence of microfinance being a liquidity tool that reduces vulnerability to income and aids creation of additional household income which therefore raises the standard of living of these households or beneficiaries of microfinance.

Building up on the empirical literature on positive microfinance effects on households' income, a large size of microfinance studies from various disciplines has since emerged including Hashemi (1996), Versluvysen (1999), Morduch (2000), Littlefield et al. (20003), Morduch et al. (2005) and Van Rooyen et al. (2012), whose findings all point out that access to microfinance has positive impact on household income useful in poverty reduction and household well-being at different levels, including asset acquisition, household nutrition, health, food security, children education, women empowerment and social cohesion.

The findings on positive impacts of microfinance have since been corroborated in most recent impact studies focused on establishing relationship between microfinance and household welfare in various African and Asian settings. Abdullah (2010) and 2012, conducted studies to measure impact of a Malaysian microcredit scheme on quality of life of hard core poor households in Peninsular. The main objective of these studies was to examine whether participation in this microcredit program improved the quality of life, using a quality of life index comprised of eleven indicators. Study findings provided evidence that access to microfinance improved quality of life or poor rural households in Malaysia as participant respondents lived in bigger and better houses, used permanent housing materials, used environmentally safe cooking fuel, enjoyed healthy toilet facilities, owned refrigerators, washing machines and televisions more than non-participants.

Empirical evidence of Abdullah studies was echoed by Rashid et al. (2015), who also provided empirical evidence of microfinance impact on poverty reduction from the Malaysian perspective and found Malaysian microfinance institutions (AIM) to have had positive effects

on household income women borrowers who spent three years in microfinance schemes, compared to borrowers who had not benefitted or received microfinance treatment. Another study conducted in the Asian states was that of Thibbotuwawa (2012), who assessed the impact of microfinance on household welfare specifically focusing on the case of Samurdhi microfinance program in Sri Lanka; and also found that Samurdhi had a significant impact on household welfare on income, consumption and education.

Ocasio (2012) conducted an impact assessment of how access to microfinance credit impacts economic outcomes at household village level in Bangladesh; the findings of which showed existence of positive impacts on household income and ownership of land assets. The main result of this Bangladesh study was that micro-loans, especially those disbursed by Grameen Bank have positive and statistically significant effect on household income that enabled borrowers to start up enterprises build assets and remove credit constraints. Furthermore, the study also found that positive impact results of microfinance could be larger in magnitude and be more pronounced when issued along with capability enhancing services including basic literacy and skill training.

Imai (2014) also examined whether household access to microfinance reduces poverty in Pakistan by collecting primary empirical data from both borrower and non-borrower households. The study found microfinance programmes to have a positive impact on the participating households. Poverty-reducing effects were observed on a number of indicators in this Pakistan study, including expenditure on healthcare, clothing and household income, and on certain dwelling characteristics, such as water supply and the quality of roofing and walls.

There is also a series of impact studies assessing relationship between microfinance and household welfare within the African region. Flowing from an early impact study conducted by Meehan (1999) of credit provision in Tigray region in Ethiopia, empirical evidence has found that provision of credit resulted in increased household level and decreasing poverty levels in the study area. These findings were reported by majority of respondents (83%) who all agreed that access to credit services led to an initial increase in household income. Respondents also reported that incremental income was then used for basic household food supply, clothing and education of children.

Van Rooyen et al (2014) conducted a systematic review of evidence of the impacts of micro credit and micro savings on the poor people in rural settings in Sub Saharan Africa which included Ethiopia, Ghana, Kenya, Madagascar, Malawi, Rwanda, South Africa, Tanzania (specifically Zanzibar), Uganda and Zimbabwe. This systematic review study considered impacts on income, savings, expenditure, accumulation of assets and non-financial outcomes including health, nutrition, food security, education, housing, job creation and social cohesion. While findings varied from country to country, findings showed microfinance (credit and savings) to have positive impact on income, with clients' income higher than that of non-clients.

At household level, micro credit and micro savings had positive income effects that resulted in increased expenditure and accumulation of assets, while at business level data from two countries supported the hypothesis that farmers who received micro credit diversified the crops they grow. In relation to non-financial outcomes, microfinance was found to have positive effect on health of poor in terms of the amounts of days they were unable to work due to sickness, number of sickness episodes, level of nutrition and investment in health care. Positive health effects in Tanzania and Rwanda were observed through improved food security and nutrition. Access to micro credit and micro savings in both these countries resulted in significant positive improvements in meal quality and increase in consumption of meat.

Similarly, microfinance in Zimbabwe had increased income and consumption effects evidenced by increased consumption of nutritious food (meat, fish chicken and milk) in clients compared to non-clients. Similar positive health effects were observed in Kenya, Malawi and Ethiopia, with access to credit by Malawian household head found to improve only girls' nutrition as measured by height for age. Moreover, access to microfinance was also found to have positive impact on housing, particularly in Zanzibar, wherein greater proportion of client households as compared to non-client households became owners of places in which they resided. Furthermore, client households were more likely to increase number of rental units than non-client households.

Salia (2014) assessed the effect of microcredit on household welfare through observing empirical evidence from women borrowers and non-borrowers in Tanzania; and found that borrowers' households were more likely to own houses they lived in than non-borrowers and

also that microcredit contributed to improved welfare of women borrowers by enabling them to own long-term assets. The finding on microcredit having positive influence on household ownership has be corroborated in several empirical literature including Lacalle et al. (2008) found that microcredit recipients in Rwanda had more improvements to their homes than non-recipients. In the case of Ghana, Nanor (2008) also found that households of microfinance clients spent more on non-food items than non-client households.

Similarly, Barnes (2001), found that in Uganda more microcredit client households became owners of the places in which they lived than non-clients. Brannen (2010) also showed that in Zanzibar participants in village savings and credit associations were more likely to own their homes than non-participants. In addition, empirical evidence from both Uganda and Zanzibar showed that microfinance clients had been able to assess household assets like mattresses, radios, stoves and beds than non-clients. in the South African context, empirical evidence showed related findings as Uganda and Zanzibar, in that microfinance clients' households were better off in terms of household assets than non-clients.

A microfinance impact assessment report commissioned on behalf of the United Nations Capital Development Fund (2004) also found evidence of increased assets, notably the acquisition of land as an asset at household level in Haiti, Kenya, Malawi and Nigeria wherein the study was commissioned. Further, there was compelling evidence of improvements in household welfare with recipients of microfinance programme loans overcoming food insecurity, paying for medical expenses and higher enrolment in education, compared to non-clients' households.

While looking at it from the perspective of women enterprises in Ghana, Adjei (2009) also found that there was a significant association between participation in microcredit program and ownership of refrigerators and sewing machines. Similarly, Matomela (2016) studied impact of microfinance loans from a non-profit organization on women from the Amathole and Amahlathi Local Municipalities in the Eastern Cape. His findings pointed to positive relationship between microfinance access and non-financial effects that help solve human poverty. This is because the loans the women received helped in successfully fulfilling their caregiving roles in respect of food security and nutrition, education of their children, improved housing and other self-actualisation benefits flowing from gaining self-confidence and being active community members.

While a study conducted in the Nigerian context did not specifically assess impact of microfinance on household welfare by using any specific indicators, Christensson (2017) nevertheless investigated the relationship between access to microfinance institutions and poverty reduction. Results of this study showed existence of a negative relationship between number of microfinance institutions and poverty levels in Nigeria, which therefore also indicated that prevalence of microfinance institutions reduced poverty levels.

Abera et al. (2019) conducted an impact study to assess impact of microfinance on rural household poverty in Ethiopia by assessing whether provision of microfinance services brought any changes on the living standards of clients. Impact of microfinance programme at the household level was assessed based on average income, and how this in turn affected or spilled over on selected poverty indicators including education, access to medical facilities, nutritional status, employment generation and income. The study found that availability of credit had positive effects on income which resulted in improved food security of clients, improved access to education and health. Clients reported that they were better off after obtaining the financial services.

Bzeouich (2019) also conducted a study assessing how microfinance improved social welfare of beneficiary' households in Tunisia and thus contributing to literature in the field of evaluation of microfinance effects on social status of its beneficiaries. Findings corroborated most literature on positive effects of microfinance on social welfare. His paper specifically identified that microfinance positive effects were through increased food expenditure, access to health services, education for children, and improved household living arrangements.

Some existing literature however opposes this positive relationship between microfinance and household welfare. While Ditcher and Harper (2007) acknowledged that microfinance had non-income effects that can positively influence recipients' lives, a conclusive finding of their study was that microfinance had inconclusive evidence of success in alleviating poverty. Their main assertion is that microfinance has become nothing more than a 'development fad', which has not only transferred money into the hands of the poor, but has also shown very little development results. Ditcher and Harper (2007) further suggested that microfinance has received more credit than it deserved as it does not eradicate poverty but is only a tool to deal with the harshness of its impact.

There are other studies that find a negative relationship between microfinance and poverty eradication. Adjei et al. (2009); Barnes, Keogh et al. (2001), Waelde (2011) and Roodman (2012) are amongst those presenting negative relationships between microfinance access and poverty. While not disputing its short term effects of microfinance on income and consumption, these studies conclude that microfinance does not perform well as a tool to escape poverty. In fact, in contrary to those finding positive microfinance effects on poverty, these studies' empirical evidence corroborated that microfinance had negative impacts over time with recurring clients' businesses becoming less successful; and levels of health and education decreasing, the longer individuals remained in the microfinance program.

Volschenk (2002), Wright (1999), Robinson (2001), Rutherford (1999) and Wright and Mutesasira (2001) all found that microfinance has negative impact of on poverty and household welfare. A lot of these studies investigated further on why microfinance may have been ineffective as a poverty eradication policy tool, and most agreed that operational issues facing microfinance institutions impede on the programme performance thus rendering it ineffective. Some of operational matters these scholars touch on include the issue of proximity to financial institutions particularly, geographic distance from financial institutions, limited trading hours and other operational issues related to accessing these financial services by the poor.

In concurrence, Ledgerwood (1999) also found that microfinance to be ineffective because of implementation challenges of trying to replicate models in different geographies and cultures. In addition to these his study was valuable in pointing out differences in consumption, entrepreneurial focus of microfinance services offered, poor assessment of the social disposition of the poor and the effect of economic circumstances on repayment capacity as other reasons for unsuccessful implementation of microfinance programmes. In addition, Ledgerwood (2000) established that counterproductive credit, non-supportive policy framework and liquidity problems were some of microfinance institutions' constraints that rendered microfinance programmes ineffective as a poverty-eradicating tool.

Ineffectiveness of microfinance in improving livelihoods among people living in rural communities was corroborated by Marr (2012), who cited that weaknesses in the design and implementation of microfinance as the main reason microfinance effectiveness remained uncertain in the rural context. And more critically, Marr (2012) also found uncertainty of microfinance effectiveness in rural setting to be linked to constraints in the rural financial environment. His paper argued that for microfinance to be more effective, not only do new

impact methodologies and more diverse types of financial services need to be developed, but also, primarily, risks and operating costs need to be reduced to make rural clients more attractive to financial intermediaries.

Bateman (2012) also described micro credit as one of the most calamitous programme interventions in South Africa, post-apartheid era for lack of impacts. His findings supported an earlier study of Sheraton (2004) which had analysed the effectiveness of microfinance in Western Cape, and showed that microfinance is not sufficient to have a significant impact on poverty reduction of its clients. Adding to these debates Matomela (2016) also found that use of microfinance in Amathole District aggravates the debt problem by creating over-indebtedness, not creating enough jobs and adding to poverty crisis.

Coleman (1999) argued that the conflicting empirical evidence on the impact of microfinance may be accounted for by differences in methodology, failure to control for selection bias and indigeneity, and differences in what actually constitute positive impact. This finding was corroborated in a recent study investigating impact of microfinance on household welfare in Botswana. Okurut et al. (2014) assessed a nationally representative sample of 503 households in Botswana using an econometric model adapted from Coleman (1999) and results suggested that microfinance had no significant effect on household welfare, which is consistent with Okurut and Bategeka (2006) who found no impact of microfinance on the welfare of the poor in Uganda; and Banerjee et al. (2013) who found that consumption was still no different in treatment areas, and the average business was still no more profitable in treated areas versus no treated in India.

Some researchers have begun pinning reasons for ineffectiveness of microfinance to methodological approaches used for analysis. In this regard, Duvendack et al. (2011) found that microfinance impact evaluations suffer from weak methodological approaches and data inadequacy which consequently leads to unreliable impact estimates and the misconceptions about the actual impact of microfinance. This view was echoed by Bateman (2012,) who also reasoned that the rising criticism against microfinance was as a result of a lack of substantive empirical evidence supporting its promise to alleviate poverty. Both these studies identify and recommend accurate methodological approaches as an area of focus for future studies.

There is generally a lack of studies of impact of microfinance in the South African context, which is even more pronounced in the context of rural provinces like the Eastern Cape.

Nonetheless, this research paper seeks to contribute to currently existing contradictory empirical literature and to filling this gap, by specifically examining how microfinance has impacted on beneficiaries in Ngcobo villages within the Eastern Cape. While it is impossible to pre-empt which side of the debate this paper will corroborate, it can only be anticipated that it will reinforce invaluable discussions on the household welfare impact of microfinance. Additionally, it can also be anticipated that it will contribute towards the new dawn of literature that goes beyond criticism of microfinance towards pointing out hindrances towards effectiveness of the same.

CHAPTER 3 METHODOLOGY

3.1 INTRODUCTION

This section outlines research methodology in order to clearly elaborate how research investigation was done. Specific discussion points under methodology include research designs, quantitative research designs, descriptive quantitative research, population, sample and sampling process, data collection instrument, design and data analysis procedures, measurement and description of variables and reliability and validity of data. Under each of these discussion points, the goal is to determine the link between the research design, tools and instruments used and the research question or objectives of this paper.

3.2 RESEARCH DESIGN

MacMillan and Schumacher (2001) define research design as a plan for selecting subjects, research sites and data collection procedures to answer research question(s); the ultimate goal of which is to provide credible results. Durrheim (2004) defines research design as a strategic framework for action that serves as a bridge between research questions and the implementation of an appropriate research strategy. Based on these two definitions, one can simplify research design as an inapt plan of a research study which provides a coherent and logical framework to collect relevant data to solve the research problem.

Research designs are broadly viewed from two perspectives, namely qualitative and quantitative. Qualitative research designs are generally non-numerical, unquantifiable and non-mathematical analytical research techniques including narrative, phenomenology, ethnography, case study and grounded theory. Quantitative research designs on the other hand are systematic empirical investigations of observable phenomena using statistical, mathematical and computational techniques. Simply put, quantitative research designs enable collection quantifiable information and application of econometric techniques to analyse data.

Selection of the suitable research design was not only based on this basic difference between the two research designs; it was also centred on overarching consideration on which between qualitative or quantitative designs would do best job in providing reliable answers to the paper's main research question, that is what impact has microfinance access had on household welfare in selected areas in Ngcobo. This is why qualitative research designs including phenomenology, ethnography and grounded theory were unfitting for this research paper; but

rather quantitative research design. However, there are various forms of quantitative research designs. Having identified quantitative or deductive research as best suited research design to solve this paper's research problem, it was then obligatory to reflect and elaborate on the different quantitative or deductive research designs in order to identify the one that would best solve research problem.

3.2.1 QUANTITATIVE RESEARCH DESIGNS

There are several quantitative research designs commonly cited in literature including exploratory, explanatory, causal-comparative, experimental, correlational and descriptive; any choice of which depends on whether a researcher seeks to explore, explain. establish nature, cause and effects relationships or to describe a particular research phenomenon. In this regard, exploratory quantitative research would be ideal if the intention of the paper was to gain new insights, discover new ideas, and for increasing knowledge of microfinance access and household welfare as defined phenomena. Causal-comparative quantitative research would be an ideal choice if the paper intended to examine causal-effect interaction between microfinance access and household welfare and how the independent variable influences the dependent variables.

Experimental quantitative research on the other hand, would be the best research design if the intention of the paper was to go beyond just studying the cause and effect relationship between microfinance access and household welfare (dependent and independent variables); but also allow for further manipulation and introduction of change and monitoring effects of these on the same. In other words, experimental quantitative research would enable the researcher to even extend beyond a once- off investigation. Correlational research would be suitable to study the nature and strength or direction of the relationship between microfinance access and household welfare. Explanatory quantitative research offers a once off in-depth explanation of effect of the independent variable (in this case microfinance access) on the dependant variable (household welfare in selected Ngcobo villages), which is the intention of this paper.

The objective of this paper is purely to undertake an in-depth assessment on whether microfinance access has had any form of impact on households' welfare in Ngcobo; without necessarily probing new insights on microfinance access and household welfare. At the same time the paper seeks to assess how microfinance impacts households' welfare and the nature

of the relationship between microfinance access and household welfare. Therefore, exploratory, causal-comparative, experimental and correlational quantitative research designs extend beyond the intended investigation objectives of this paper. By implication, explanatory quantitative research design was befitting.

3.2.2 EXPLANATORY QUANTITATIVE RESEARCH

There are also various types of explanatory quantitative research including focus group, literature research, case study and in-depth study or depth interview. Again, the bone of contention was choosing one of these explanatory research methods considered appropriate, not only meet the research objectives (explaining research phenomenon) but also offer credible results. To make this selection, main consideration was given to the kind of data that this research paper needed. For instance, literature research, focus group and case study explanatory research would have been suitable if the intention was to simply to observe or analyse and measure household welfare effects of microfinance access from currently existing records (secondary data), with little or no interaction with research subjects. However, given that information on microfinance access is not readily available as microfinance institutions treat it as rather confidential, in-depth interview or survey explanatory quantitative research was mostly suitable.

This secondary data limitation also meant households would be the only other viable main source from which the required microfinance access and household welfare information could be sourced Explanatory in-depth survey method enabled collection of required primary data on the sampled population on microfinance access and its impact on household welfare. Furthermore, explanatory survey research technique choice was also influenced by the fact that the paper merely sought to assess the impact of microfinance access on household welfare, by simply observing these variables and using statistically based equations to report findings as they are; without making any attempt to manipulate or control them. The following subsections further elaborate on how survey was carried out.

3.3 POPULATION, SAMPLE AND SAMPLING TECHNIQUE

Sampling in research is done to observe a proportion of a larger group of possible participants and statements made from these groups are used to make generalisations that can be applied

to the rest of the population (Salkind, 2010). There was a total of 33 156 number of households in Ngcobo registered by Statistics South in 2016, from which a sample of fifty households was selected. The sampled households covered five administrative areas within Ngcobo, namely Nyanga, Manzana, Ngcobo Central Business District, Mjanyana and Clarkebury.

Non-probability sampling technique was used to select these fifty households wherein the survey questionnaire was administered. To be exact, convenience random sampling was specifically used to select this sample of fifty households. Three key factors underpinning non-probability convenience sampling were availability of respondents to participate in the survey. Secondly, ease of administering the questionnaire; hence preference was given to literate household heads or breadwinners as respondents. Thirdly, ease of accessing the households, as some of these households are in deep rural villages and therefore those households closest to tarred roads in the administrative areas were selected.

Ultimately, the fifty randomly selected households included both households that have not and those that have since benefitted or accessed microfinance either of products and services, namely micro credit (loans), savings (stokvels) or micro-insurance (burials). This was very useful for not only assessing impact of household welfare, but proved invaluable in also making comparisons between households' welfare of those that had participated in microfinance initiatives versus those that had not. Furthermore, it enabled identification of challenges underpinning non-access of microfinance in Ngcobo.

3.4 DATA COLLECTION INSTRUMENT, DESIGN AND PROCEDURES

A survey was administered through personal interviews with all the fifty selected households forming the sample. Personal interviews were deemed appropriate, owing to their advantages including providing explanations to questions, recording accurate responses, reduced errors that may be caused by variations in respondents' understanding and interpretation of the same especially in case of passive interviews, ability to draw in-depth insights where necessary. Overall, the on the spot filling of responses translated into high (100%) response rate, which would have been impossible in the case of either telephonic or on-line administered surveys.

3.4.1 QUESTIONNAIRE DESIGN

Using literature review, a questionnaire was designed, comprising structured questions. Structure questions were deemed most apt for quantitative research as they allowed standardisation of data. The questionnaire (attached as Appendix B) was subdivided into five sections to enable abstraction of information on demographics, microfinance status, food consumption patterns, main dwelling features or indicators as well as asset ownership patterns.

i. Sections1 and 2 provided demographic information including age, gender, home language, marital status, employment status, education levels, number of dependants and household size; and included microfinance status questions on whether a respondent has ever accessed microfinance products and services, whether this was once off or regular access, specific products and services accessed, what amounts of micro-credit (loans) were accessed and purpose or use of loans;
ii. Section 3 entailed food consumption related questions to establish whether respondents' diets were either high protein, carbohydrate or starch, frequency of consumption of either food groups per week and frequency of purchasing different foods consumed in a month;
iii. Section 4 entailed questions aimed at identifying dwelling related indicators including land tenure status, type of material used in roof, wall and floors of the main dwellings, the type of cooking fuel, drinking water supply and toilet facility available and
iv. Section 5 entails questions to identify asset- related ownership patterns, with these assets sub-categories into livestock, transport (including cars, tractors, motorcycles and bicycles) as well as household electronics and appliances (including Television, Radio, Iron, kettle and toast, stove, washing machine, fans and others).

The general idea was to use these multiple indicators, which sufficiently uncover the research problem and thus make informed assessment of impact of microfinance initiatives on households' welfare in Ngcobo. More importantly, they make a determination of how those welfare outcomes differ between those households that have never accessed microfinance and those that have over time.

3.4.2 REGRESSION MODEL

A simple multiple regression model which was used as a base to illustrate the statistical association between household access to microfinance and household welfare is specified as follows:

$$Y_i = \alpha + \gamma D_i + \sum_j^n \beta x_j + \varepsilon_i$$

where Y is some measure of household welfare, such as household consumption patterns/income, while D is some dummy variable that captures whether household i has in the past benefited from some microfinance scheme or not. The coefficient γ could be thought as measuring the average effect of the policy variable (access to microfinance) to household welfare. The variables x_j are the control variables that need to be taken into account possibly because they are also statistically associated with household welfare. This is necessary to limit the coefficient bias due to omitted variables.

The control variables included include the demographic profiles of household breadwinners (including gender and age), levels of education (measured by number of schooling years of respondents), a dummy variable of whether household breadwinner is employed or not. Ideally, as many relevant control variables as the data collected allowed were included in order to avoid the omitted variable regression bias. Data for all the above variables was collected via the questionnaire to selected fifty households in Ngcobo region. ε_i is the error term.

3.4.3 PARTICIPATION ESTIMATION APPROACH

More than just estimating statistical associations, this study also sought to establish causal relationship between access to microfinance and some measure of household welfare. To extend the above baseline regression model teasing out any causal effects, instrumental variables estimation techniques were used, instrumenting access to microfinance by the distance between a sampled household and the nearest local microfinance. The aim was to capture the effect of microfinance on households that have benefitted compared to those that would have benefitted but could not due to the programmes' inaccessibility.

If the sample was truly random then estimating the impact of the microfinance programme would be reduced to a simple regression of the type illustrated below:

$$Y_i = \alpha + bT_i + \varepsilon_i$$

The estimated coefficient b on T_i (with $T_i = 1$ if household has had access to microfinance) should then represent the average effect of the microfinance programme on household welfare as measured by Y. However, as households were not assigned randomly but rather self-selected into the programme it is plausible that those who were likely to benefit the most were the ones most likely to search for microfinance programmes rendering our collected sample not to be completely random. The non-random assignment feature will, due to the self-selection bias in the sample, lead to a biased estimated coefficient especially when interest is on estimating programme impact.

To deal with these sampling and programme treatment challenges, the simple regression estimation procedures needed to be modified in order to deal with or attenuate the effects of systematic and yet unobserved heterogeneity on programme participants. The instrumental variable method has other benefits which include attenuating the effects omitted variables bias, mis measured, and or endogenous variables.

To deal with all the data concerns we then re-specified our regression model into a simplified common-impact model:

$Y_i = \alpha^C + (\alpha^T - \alpha^C)T_i + X_i\beta + \varepsilon_i$, with $i = 1, \dots n$; and X_i representing the covariates.

The instrumental variable for access to microfinance is derived from the participation or assignment equation: $T_i = Z_i + X_i\gamma + \mu_i$; with Z_i being an instrumental variable that correlates with whether the household has had access to microfinance or not. Within the sampled data, this was captured by the distance between each household and the nearest microfinance outlet.

3.4.5 MEASUREMENT AND DESCRIPTION OF VARIABLES

There are two major schools of thought that are prominent in existing literature on impact assessment of microfinance. Abera (2019) differentiates the first approach focuses on the intended target groups of the programme by assessing microfinance impact at individual, household, enterprise and community level, while the second focuses on the microfinance institutions by assessing outreach and sustainability. In order to answer the research question, the former approach applies, with specific focus at the household level. While there is no

standard approach or model to measure impact of microfinance at the household level, World Bank (2003) established that assessment of relative well-being of an individual without considering conditions of an entire household provides a distorted view of welfare. This has since led to adoption and recognition of a resounding poverty assessment approach which extends beyond income, to also consider household consumption indicators related to food, dwelling and assets, the combination of which varies from study to study.

Afrane (2002), Brauu, Hiaat and Woodworth (2009) as well as Chient, Snodgrass (2001), have commonly used food, housing conditions and asset indicators to measure household welfare impacts of microfinance access. Similarly, these indicators were also used by Morduch and Hachemi (2003) who pointed out their usefulness as poverty indicators based on recommendations by World Bank, International Labour Organisation, United Nations Development Bank and other major agencies. Underpinned in these empirical studies, household welfare effects of microfinance access in Ngcobo were measured by observing food, dwelling and asset variables as subjectively reported by the selected respondents.

3.4.5.1 DEPENDENT VARIABLE: HOUSEHOLD WELFARE

Household welfare is the dependent variable, as there ought to be some level of participation in one way or the other (loans, savings or micro insurance) on microfinance initiatives offered in Ngcobo that would have resulted in some measure of improvement in household welfare. In relation to food consumption patterns, Brau and Woller (2004) link improved household effects of microfinance recipients to quality and value of food purchased, which should translate in shifts away from high carbohydrates and starch diets to higher protein diets.

Secondly, access to microfinance also enables households to improve housing conditions. Housing related indicators observing features of the main dwellings were used in most impact studies including Afrane (2002), Chen and Snodgrass (2001), Gubert and Roubaud (2005) and Merrill (2012).The general idea being that the more well-off a household, the more durable the material used to roof and floor main dwellings, Mc Intosh, Villaran and Wydrick (2011); and the more the shift from alternatives forms of energy such as paraffin to using electricity as the main cooking fuel or energy (World Bank, 2003).

Thirdly, in relation to assets, income effects of microfinance result in increased percentage possession of assets and thus the recommended use of asset indicator as a judge of microfinance impact. The rationale offered by (Coleman 2002), Filmer and Pritchett (2001), UNCOF (2004) is that the better the household welfare associated with microfinance access, the more a household head should indicate range varied asset ownership patterns of livestock, transport and household appliances and electronics.

Using the developed questionnaire, data was obtained from the fifty sampled households in Ngcobo respondents from three dimensions including food, dwelling and asset indicators; a total of seven indicators were used to formulate household welfare index. These indicators were food groups' consumption patterns, material of roof and floor of the main dwelling, cooking fuel, livestock, transport and appliances and electronics. Household welfare index is thus a subjective sum composite of sub-measures for consumption, dwelling and asset ownership reported microfinance impact by respondents.

In order to assign household welfare index, relatively well-off households were assigned 1, while poorer households were assigned 0, for each of the seven mentioned welfare variables as follows:

- ✓ 1 for high protein diet, otherwise zero;
- ✓ 1 for cement and tiled floor covering in the main dwelling, otherwise zero;
- ✓ 1 for tiled roof in the main dwelling, otherwise zero;
- ✓ 1 for electricity as the main cooking fuel, otherwise zero
- ✓ 1 for vehicle or tractor or motor bicycle ownership, otherwise zero;
- ✓ 1 for livestock ownership, otherwise zero and
- ✓ 1 for full range of household appliances and electronics ownership, otherwise zero.

Thus a possible minimum welfare index would be 0, in the event that a household displays poor welfare and a maximum welfare index of 7, where a household has relatively well welfare across all 7 variables.

3.4.5.2 INDEPENDENT AND CONTROL VARIABLES

The regression model uses access to microfinance access as the independent variable, and main determinant of household welfare measure. Marr (2002), Schreiner et al. (2003), and Ellis (1999) point out that access to microfinance has positive effects on several household welfare

variables that are grouped as consumption smoothing, asset accumulation and shelter effects. Similarly, CGAP (2003) also states that household level microfinance access enables recipient to build and change their mix of assets, build and improve their houses as well as purchase animals (livestock) and consumer durables.

Furthermore, there are theoretically and empirically based specific character and demographic variables which have an impact on microfinance access and therefore household welfare. These variables are often used as control variables (underpinning the independent variable) and used to explain the dependent variable. Impact assessment studies of Helmes (2006), the UN (2008), and Morduch (2005) stress that the influence of these control variables on household welfare cannot be overlooked. To this end, Arun et al. (2006), Ashiaf and Ibrahin (2014), Balogun and Yusuf (2011) and Akihlade (2013) list these variables as age, education level, employment status and household size or number of dependants. As such, five demographic control variables used to establish microfinance access and explain household welfare are age, gender, education level, employment status and household size. Furthermore, distance from the microfinance institutions is another variable underpinning microfinance access.

Access to microfinance: refers to data captured on whether a household head has had any access of micro financing initiatives or products including loans, savings and micro insurance. The microfinance access variable takes a value of 1 for those who have since benefitted from microfinance institutions' offerings in Ngcobo local municipality, otherwise 0 if a household head has never accessed MFI offerings and products.

Age: refers to the number of years each respondent has lived. Bonsal (2011) and Aun et al. (2006) proved that the older the household head, the more their microfinance access increases and the better their household welfare. Age is denoted by number of years each household head has lived, youngest respondent interviewed was 22 and eldest was 60.

Gender: refers to whether respondents are male or female. MFIs aim to assist women achieve financial independence because the likelihood is that women are more concerned about the improvement of their household rather than their individual wellbeing and status in the family. Evidence by Garikipati (2008) proved that lending to women strengthens the household as a

whole by improving the household's ability to cope with various vulnerabilities. Thus the gender variable takes number one (1) if respondent is female and zero (0) if male.

Education level: refers to highest schooling or qualification level of each of the fifty household heads. Education is commonly used as a control variable in similar household welfare tests and the rationale Coleman (1999) and Bae et al. (2012) offered is that education is a form of human capital and therefore the higher the education level of a household head, the lower the risks of a household falling into poverty. Awan et al. (20011), Morrisson (2002) and Herber (2002) emphasise that education has a proven positive impact on poverty, a positive correlation with income and therefore also welfare. The education variable takes zero (0) for less than Matric, one (1) for Matric and two (2) for post-Matric education level.

Employment status: refers to whether a respondent is in a job and is an important parameter to add. Ukpere et Al. (2009) reasoned that employment status variable is useful as the higher the employment status of a household head, the higher the household welfare. This variable assumes zero (0) if the respondent is unemployed, one (1) if the respondent is in short term employment including those on contracts, learnerships or internships and assumes two (2) if the respondent is in full time or permanent employment.

Household size: refers to total number of people residing in each of the fifty sampled households including dependants. The effect of household size is ambiguous, depending on the composition of household members. However, Xia Li (2010) found that the bigger the household, the lower its income per capita and thus household welfare and microfinance accessibility.

Distance: proximity in kilometres between the sampled households and microfinance institutions or outlets. The shorter the distance, the higher microfinance access levels. (Oke et Al. (2007) found that long household distance and microfinance access are negatively correlated. Similarly, Presbitero and Rabellotti (2011) estimated the same effect in relation to a household head proximity to microfinance institutions. It is thus expected that distance will negatively influence household welfare, the shortest distance being 0.6 km and furthest 89 km.

3.4.5.3 Table 1:Description of Variables

Variable	Definition	Measurement
Dependent variable		
Welfare	Household welfare index	Ranges from 0 for poorer households to 7 for higher welfare
	Household welfare dummy	0 for Poor if welfare index <=3 or 1 otherwise
Independent variable		
Access	Access of household head to microfinance.	The variable takes a value of 1 for those who have since benefitted from microfinance institutions' offerings in Ngcobo local municipality, otherwise 0 if one has never accessed MFI offerings and products.
Control variables		
Age	Age of respondent	Number of years living.
Employment status	Employment status of household head.	A value of 1 for those in short term employment including contract worker, learners and interns, otherwise 2 for those in full time or permanent employment.
Gender	Gender of household head.	A value of 1 for females, 0 for males.
Distance	Distance household to the nearest microfinance office.	Number of distance in kilometres of a respondent to Ngcobo CBD, wherein MFIs are situated. These range from 0.6kms for those respondents residing in the CBD to 89 kilometres for those living in Mjanyana administrative area.
Education Level	Number of schooling years and highest qualification levels of household heads.	A dummy variable takes on a value of 0 if respondent has less than 12 years in school or Matric, 1 if respondent has 12 years in school or Matric is the highest education level and 2 if respondent has over 12 years or post matric tertiary qualifications.
Household size	Number of dependents and other adult members of the household residing with the household head.	Numbers ranging from 0 for those with no dependants or residing alone to a maximum of 10 where households have both dependant and adult members.

3.4.6 RELIABILITY AND VALIDITY OF DATA

The importance of sufficient and appropriate evidence for any survey cannot be overstated. However, to be appropriate and sufficient, it is crucial that survey information is both valid and reliable. For validity, it was seen as important that literature review underpins variables included in the data collection instrument, so that the data collected was relevant and reliable to uncover research objectives. As a result, variables entailed in the questionnaire to measure household welfare covered a range of food, main dwelling features and assets indicators, as prescribed by the World Bank. From these, specific variables were then picked for regression.

On the other hand, wording and phrasing of questionnaires and later description of variables being measured were important for reliability. To this end, a draft questionnaire was circulated to Eastern Cape Provincial Treasury Budget and Policy specialists for validation prior the survey field trips. Lastly, not only were the questions structured and standardised, but the survey was undertaken through personal interviews and responses were self-captured.

CHAPTER 4 FINDINGS

4.1 INTRODUCTION

This chapter analysis data collected from fifty households in villages Manzana, Nyanga, Mjanyana and Clarkebury as well as Ngcobo Central Business District; and discusses research findings. Firstly, descriptive statistics is outlined under four subsections; the demographic profiles, microfinance access and detail on products and services accessed, respondents' perceptions on food consumption patterns, main dwellings" features and household appliances as a measure of household welfare and comparison of household welfare between beneficiaries and non-beneficiaries of microfinance. Secondly, statistics of regression variables is discussed. Thirdly, correlation results are analysed. Last, regression results and participation equation estimates are discussed, to conclude on whether access to microfinance had improved household welfare of the fifty surveyed households within five Ngcobo villages.

4.2.1 DEMOGRAPHIC PROFILE

Table 2 shows the demographic profiles of respondents. Majority of surveyed respondents are female, which would provide an interesting future research area testing whether microfinance participation has any gender bias. The age groups of respondents are quite spread out, with the youngest being 22 and oldest 60. However, when looked at from age-cohorts, majority of respondents surveyed are youth, which may very well be linked to why majority have single marital status.

Over half of survey participants hold post Matric or tertiary qualifications, followed by those with matric. In a similar pattern, over half of respondents were employed full time. It was interesting to observe association between education levels and employment status of surveyed respondents. With majority of respondents having between 1 and 3 dependants, it made sense that the majority of households have between 4 and 6 family members.

Table 2: Summary of Demographics

	Classification	**Frequency**	**Percentage**
Gender	Male	8	16%
	Female	42	84%
Age	20-34	33	66%
	35-49	11	22%
	50-60	6	12%
Marital Status	Single	36	72%

	Married	12	24%
	Widowed	1	2%
	Divorced	1	2%
Education Level	Less than Matric	9	18%
	Matric	15	30%
	Tertiary	26	52%
Employment Status	Unemployed	0	
	Short-term/Temporary	24	48%
	Full time/Permanent	26	52%
Number of Dependants	Zero	9	18%
	01-03	30	60%
	04-06	11	22%
Household Size	1-3	18	36%
	4-6	24	48%
	7-10	7	14%
	>10	1	2%

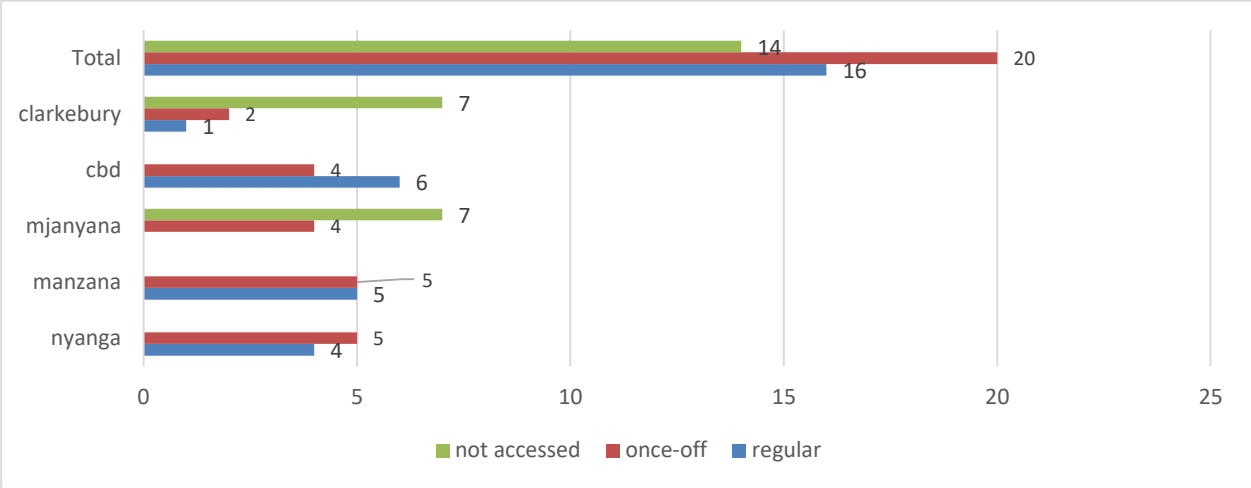
SOURCE: OWN SURVEY, 2019

The main intention of the research was to assess whether microfinance access improves household welfare in Ngcobo villages in the Eastern Cape. It was therefore crucial that a question be posed as to whether respondents had accessed any microfinance products in the past decade. Furthermore, it was equally crucial to establish whether microfinance was accessed once-off or on a regular basis. Figure 11 provides an analysis of microfinance access status.

4.2.2. HOUSEHOLD HEAD MICROFINANCE ACCESS STATUS

Figure 11 shows that majority of respondents (72%) have had access to microfinance products and services, while 28% of respondents have had no access at all to MFI products and services. While the majority of those that have accessed microfinance (56%) were once-off MFI clients, the rest (44%) were regular clients. In certain instances, more than one product or service were accessed.

Figure 11:Access of Respondents to Microfinance



SOURCE: OWN SURVEY, 2019

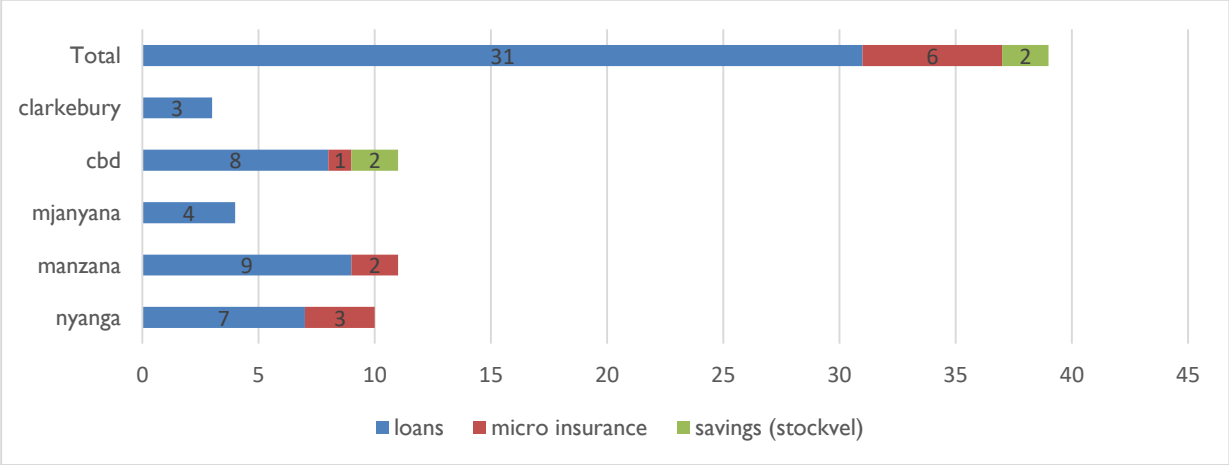
Another interesting point to note is that that those respondents from further town, are the ones that have the least access to microfinance products and services. To be specific, only 4 of the 11 (25%) respondents in Mjanyana (which is 89 km from town) have had once-off access to loans. Similarly, those in Clarkebury also have had low access to microfinance products and services (30%). In contrast, all the respondents in Nyanga, Manzana and CBD had accessed microfinance products and services. A general conclusion can thus be drawn that location from Ngcobo town (wherein the microfinance institutions are situated) presents an access bias factor.

Having established microfinance access of the surveyed respondents, it was necessary to further unpack which microfinance products or services were mostly accessed by surveyed respondents. Of the 36 respondents who have had access to MFI products and services, 31 or (86%) accessed loans, while (5) or 14% had micro-insurances and 2 or 6% had savings through stokvels. Some of the respondents have had access to more than one type of product or service offered by microfinance institutions; as a result, the totals accessed exceed the total number of respondents.

For instance, one respondent in the CBD area has accessed a loan, has a burial micro-insurance and is a stokvel member and as such deposits towards such every month. Similarly, in Manzana there were respondents with both loans and burial micro-insurances called Masingcwabane (loosely translated to mean let us bury each other) which would make the products accessed more than the 9 respondents in this region. Figure 12 presents microfinance products accessed by respondents per region.

4.2.2.1 TYPES OF MICROFINANCE PRODUCTS ACCESSED BY HOUSEHOLD HEADS

Figure 12: Types of Products Accessed by Respondents

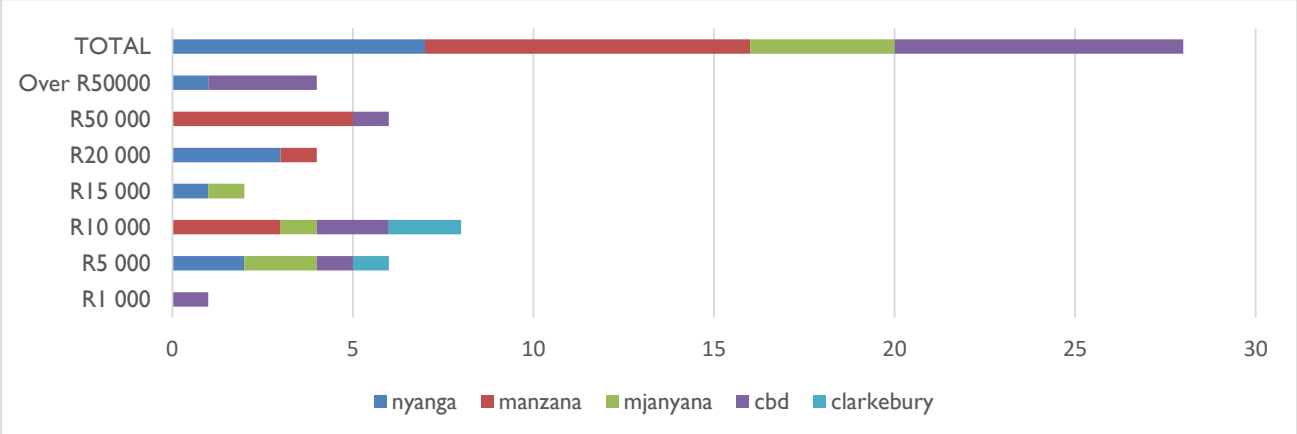


SOURCE: OWN SURVEY, 2019

In order to answer the research questions, loans were identified as a microfinance product worth further probing. This was to analyse the range of loans accessed and the use of these loans and respondents' perceptions on how accessing influenced food consumption patterns, main dwelling features, ownership patterns of livestock and transport assets and ownership patterns of household appliances. Figure 13 shows the range amounts of loans accessed, while Figure 14 shows what the loans were used for.

4.2.2.2 AMOUNTS OF LOANS ACCESSED

Figure 13: Range of Loan Amounts Accessed



SOURCE: OWN SURVEY, 2019

Except for five respondents, most of surveyed respondents indicated that they have accessed loans from microfinance outlets in Ngcobo. Respondents accessed a total of 31 loans amongst themselves, majority of which were R10 000 (25.8%) and R50 000 (19.4%). These were

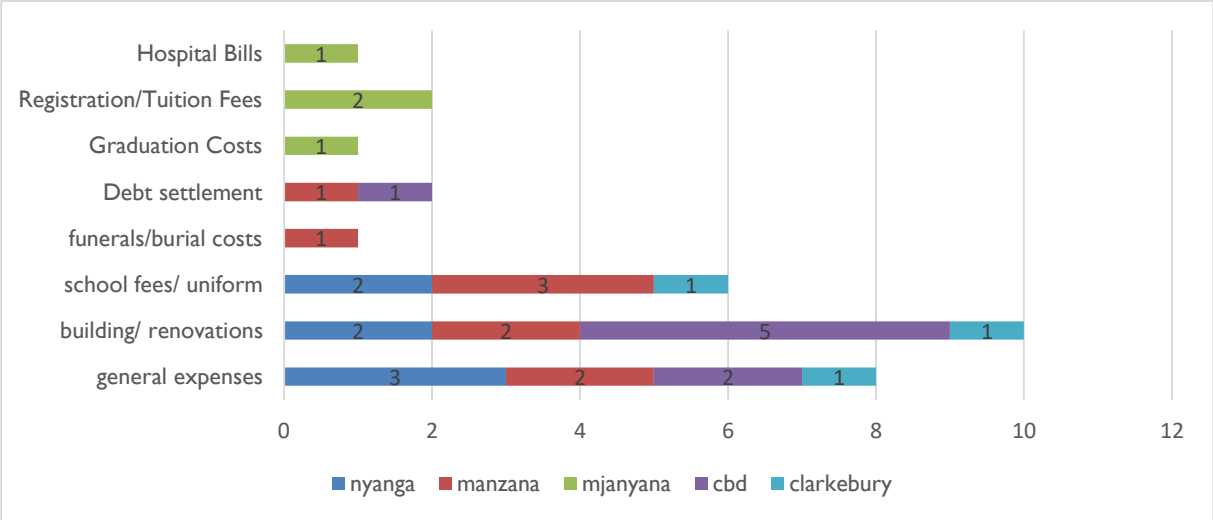
followed by loans in the R5 000 range (19.4%). Loan amounts in the ranges of R20 000 and over R50 000 had 12.9% access rate each. The smallest amount of loan accessed was R1 000.

In terms of areas, Manzana had the highest percentage of loans accessed (29%), followed by CBD (25.8%), Nyanga (22.6%) while Mjanyana and Clarkebury had the least access at 12.9% and 9.7% respectively. It is important to note that both areas with least access are within a distance from the CBD. It is equally important to note that the biggest loans were accessed by respondents residing within the CBD, whose loans ranged between R1 000 to over R50 000. In contrast, Mjanyana loans were the smallest in range amounts, ranging between minimum and maximum of R5 000 and R15 000, respectively.

4.2.2.3 REASONS FOR BORROWED LOANS

Posed with the question to provide reasons for borrowing the, Figure 14 below shows the responses provided by respondents.

Figure 14: Reasons for Borrowing



SOURCE: OWN SURVEY, 2019

An overwhelming majority of respondents said they borrowed loans for building and renovating their houses (35.4%). These were followed by (29%) who said they borrowed to cover education related costs, in particular school fees, uniforms and tuition, registration fees and graduation costs. A further (25.8%) of loans were used to cover general expenses. Examples general expenses included buying food, furniture and household appliances. Some loans (6.5%) were borrowed for emergencies such as covering burial costs of loved ones and hospital bills. Another (6.5%) of the loans were borrowed for debt settlement. To a larger

extent, these reasons for borrowing corroborate the literature reviewed on positive relationship between microfinance access and household.

4.2.3 FOOD CONSUMPTION PATTERNS, DWELLING-RELATED INDICATORS, ASSET-RELATED INDICATORS AND APPLIANCES AND ELECTRONICS OWNERSHIP

The questionnaire used four patterns to gauge household welfare outcomes or impact namely food consumption patterns, main dwellings' features, livestock and transport assets ownership patterns and household appliances ownership patterns. The following discussions present research findings on perceptions of respondents on their household welfare.

4.2.3.1 FOOD CONSUMPTION PATTERNS

In relation to food consumption patterns, World Bank (2003) prescripts were used as a guide in measuring household welfare. The general idea is that the more well off households become, the more they shift in their consumption patterns to higher protein diets and lower starch and carbohydrates consumption. In this case, a distinguishing factor for households' welfare would be that those households which have accessed microfinance over time should have higher protein diets consumed in a week. By implication, those households that have never had access to microfinance should display lower protein diets consumption and higher starch or carbohydrates diets.

The questionnaire presented respondents with a list of food items falling within various nutrient groups (starch, carbohydrates and proteins) in order to try and link household welfare to food security and nutritional patterns. Results show that Nyanga, Manzana and Ngcobo CBD respondents indicated daily consumption of meat, fish and chicken. While starch consumption varies, respondents in these regions indicated lower consumption of starches (samp and rice). In contrast, Mjanyana and Clarkebury consumption patterns showed relatively lower consumption patterns of proteins than the three other areas. It must be noted that, all the respondents that have never accessed microfinance are in these regions. If these food consumption patterns are anything to go by, one can conclude that access to microfinance has had non-financial effect on food consumption patterns; enough to conclude on positive nutrient patterns and thus better household welfare.

4.2.3.2 DWELLING-RELATED INDICATORS

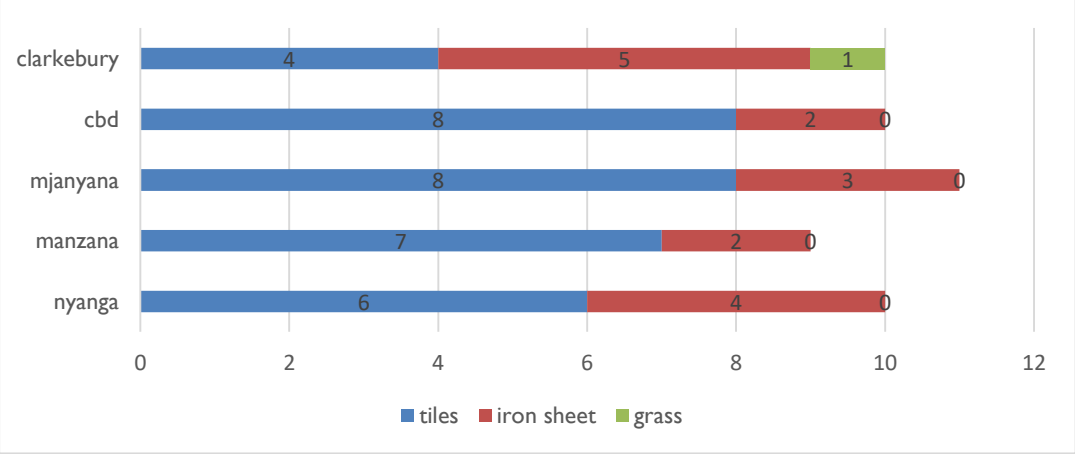
There were various dwelling indicators included in the questionnaire in order to compare household welfare of respondents. The most important for discussion are building materials

of roof, exterior wall and floors of the main dwelling house. Second are the cooking fuel, source of drinking water and type of sanitation.

4.2.3.2.1 ROOF, WALL AND FLOOR OF MAIN DWELLINGS

The general idea is that the more durable the material used for roof, wall and floor, the better the household welfare. Figure 15 shows the type of roof of main dwellings of respondent per region surveyed. It can be seen that majority of main dwellings of respondents have tiles, followed by iron sheet and a lesser extent grass. However, when looked at from the perspective of microfinance access, it can be seen that in Ngcobo CBD, Nyanga and Manzana wherein all respondents have had access to microfinance, most respondents have tiled roofs and lesser iron sheets. In contrast, Clarkebury, which had a total of seven respondents who have never accessed microfinance, had more iron sheets and even grass roofs in the main dwellings.

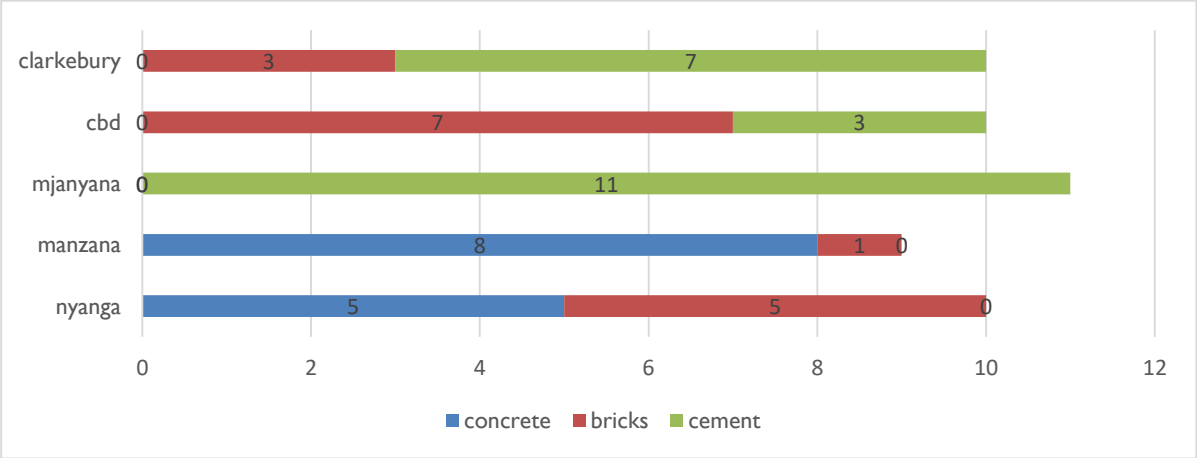
Figure 15:Types of Roof of Main Dwellings of Respondents



SOURCE: OWN SURVEY, 2019

In relation to walls of main dwellings, the findings did not reveal any significant differences between walls of those who have had microfinance access and those respondents who have not. To a greater extent, all respondents indicated that the walls of their main dwellings were durable as 26% respondents indicated that their walls are concrete, 32% have brick walls, while 44% have cement walls. In Mjanyana all respondents indicated that they have cement walls, while the CBD and Clarkebury respondents have either brick or cement walls. In Nyanga and Manzana, respondents have a variety of concrete and brick walls. Figure 16 shows the types of walls of main dwellings.

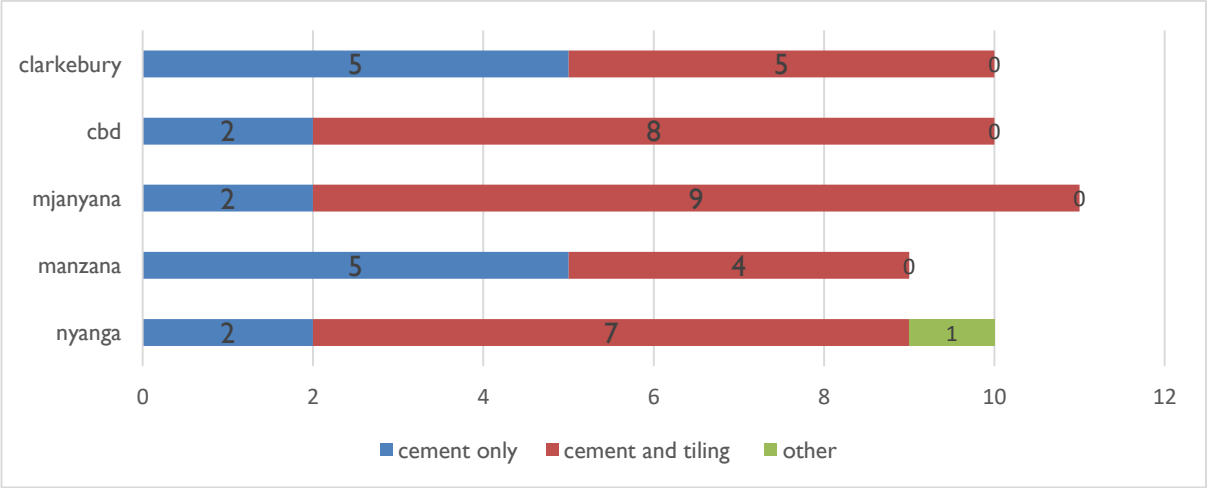
Figure 16: Types of Walls of Main Dwellings of Respondents



SOURCE: OWN SURVEY, 2019

In relation to types of floors in main dwellings, a differentiation could be observed between types of floors of those respondents who have since had access to microfinance and those who were non-beneficiaries. While the majority of respondents (66%) indicated that their floors are both cement and tiling, their location is more important to note. Combined, Nyanga, Manzana and CBD had the highest cement and tiled floors than Clarkebury and Mjanyana. This is important to note as all respondents that have never accessed microfinance are in Mjanyana and Clarkebury, and hence the main dwellings of these have only cement floors. These findings are illustrated by Figure 17 below.

Figure 17: Types of Walls of Main Dwellings of Respondents

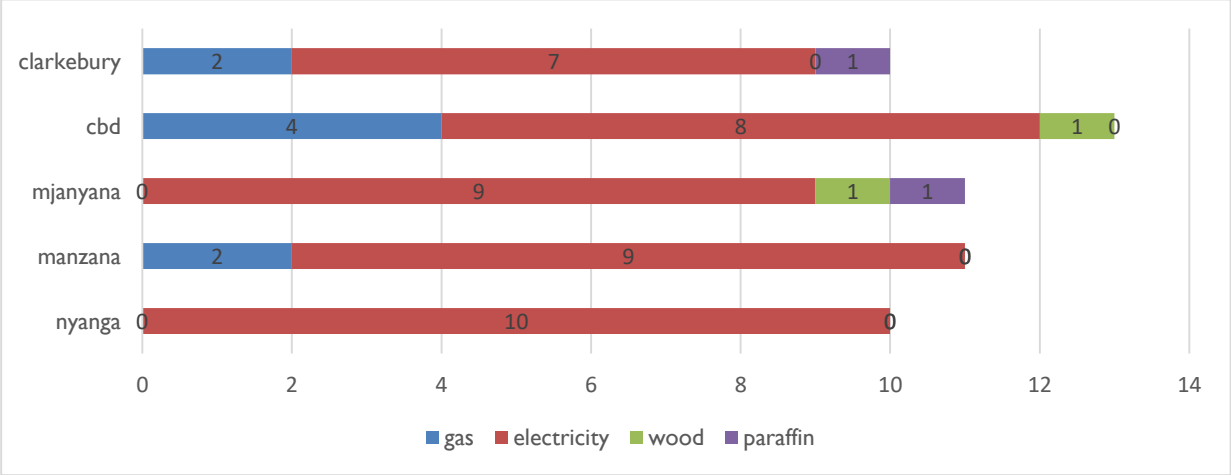


SOURCE: OWN SURVEY, 2019

4.2.3.2.2 COOKING FUEL

In relation to electricity supply, all the dwelling houses of respondents are electrified; with electricity supplied either directly by Eskom, or the municipality and Mthiza service provider. More importantly, what kind of cooking fuel is used is equally a good measure of household welfare. The majority (86%) of respondents use electricity as their cooking fuel, followed by 16% that use gas (with some using both gas and electricity), and only 4% of the respondents indicated that they use paraffin to cook. While use of electricity as a cooking fuel was found to be more a service delivery issue, it could nonetheless be seen that in Clarkebury and Mjanyana, both areas in which there were households that have never accessed microfinance, there were households using paraffin and wood as the main cooking fuel. Figure 18 shows cooking fuel used by respondents.

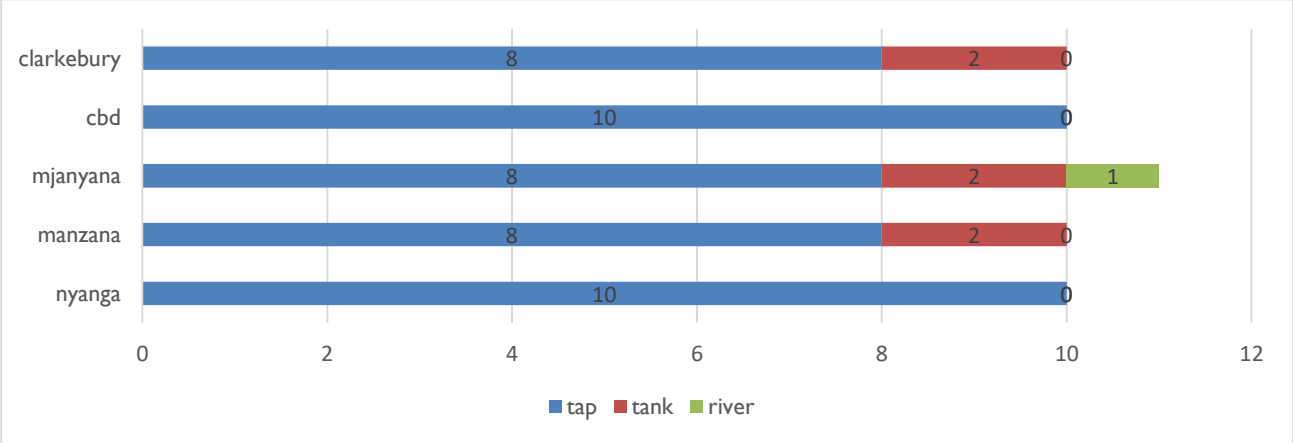
Figure 18: Types of Cooking Fuel Used by Respondents



SOURCE: OWN SURVEY, 2019

4.2.3.2.3 OTHER DWEELING RELATED INDICATORS

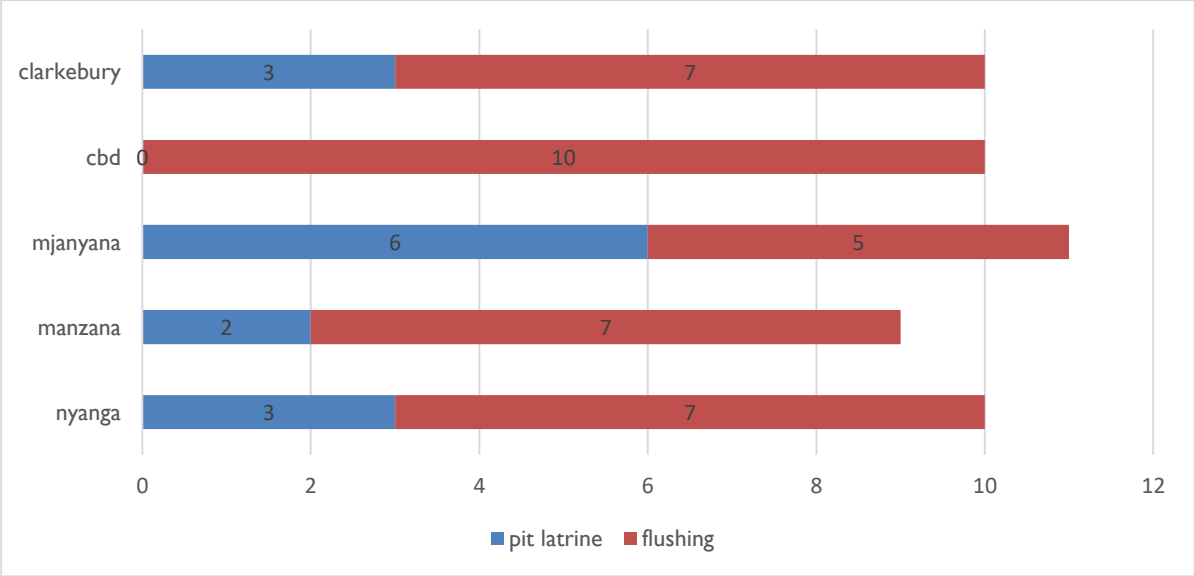
Figure 19: Sources of Drinking Water



SOURCE: OWN SURVEY, 2019

An overwhelming 88% of respondents get their drinking water from running taps inside their dwellings, followed by 12% that source it from tanks and 2% from the river.

Figure 20:Sanitation in Respondents' Main Dwellings

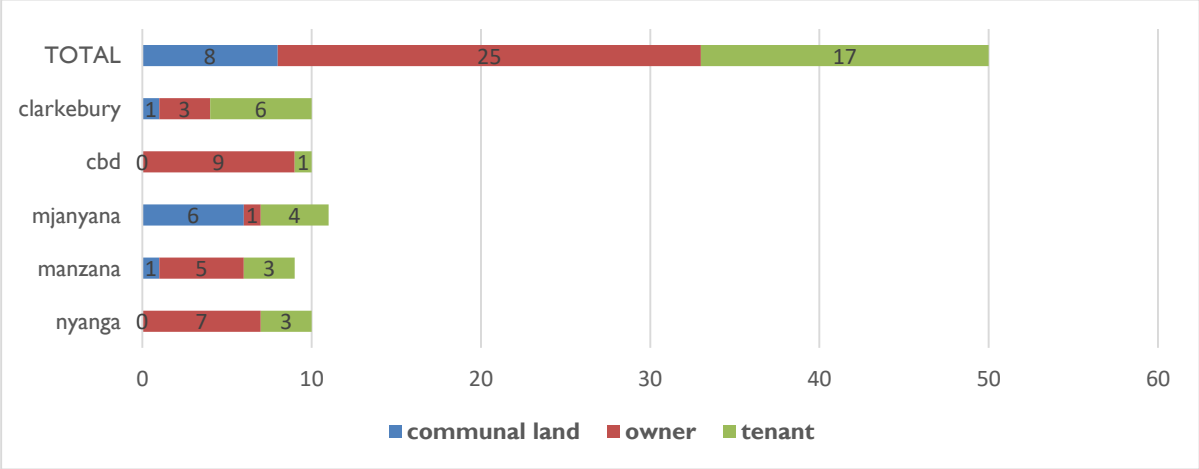


SOURCE: OWN SURVEY, 2019

In relation to type of sanitation, whether a household uses solid or liquid sanitation gives some indication of its household welfare. The norm is that solid sanitation facilities, in particular ventilated and unventilated pit latrines are from a convenient distance from the main dwelling and therefore represent lower household welfare than liquid, inside the dwelling sanitation. Posed with the question of what types of sanitation were in their main dwellings, 72% of respondents indicated they have flushing toilets, while 28% indicate they have pit latrines

outside their main dwellings. Again, the majority of households with pit latrines are in those areas with high non-access to microfinance.

Figure 21: Tenure Status of Respondents



SOURCE: OWN SURVEY, 2019

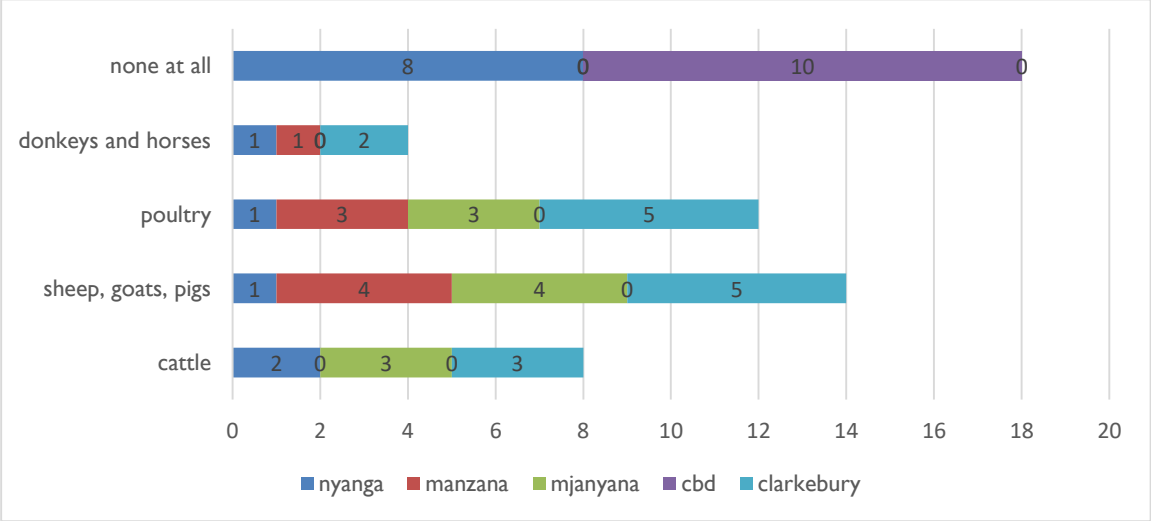
Half of the respondents (50%) own their dwellings, while 34% are tenants and 16% reside on communal land. The areas that are predominantly rural, namely Mjanyana and Clarkebury, seem to have more tenants and communal land occupancy, in contrast with those living in town and nearby areas who seem to have higher ownership of dwellings.

4.2.3.3 ASSET-RELATED INDICATORS

Different categories of asset indicators were used, which broadly fall into three categories, livestock, transport related and appliances and electronics. The idea was to measure household welfare through analysis of subsequent asset ownership and further note asset differences between those respondents who have since accessed microfinance and those respondents in Mjanyana and Clarkebury that have never had access to microfinance products and services.

4.2.3.3.1 LIVESTOCK OWNERSHIP

Figure 22: Livestock owned by Respondents

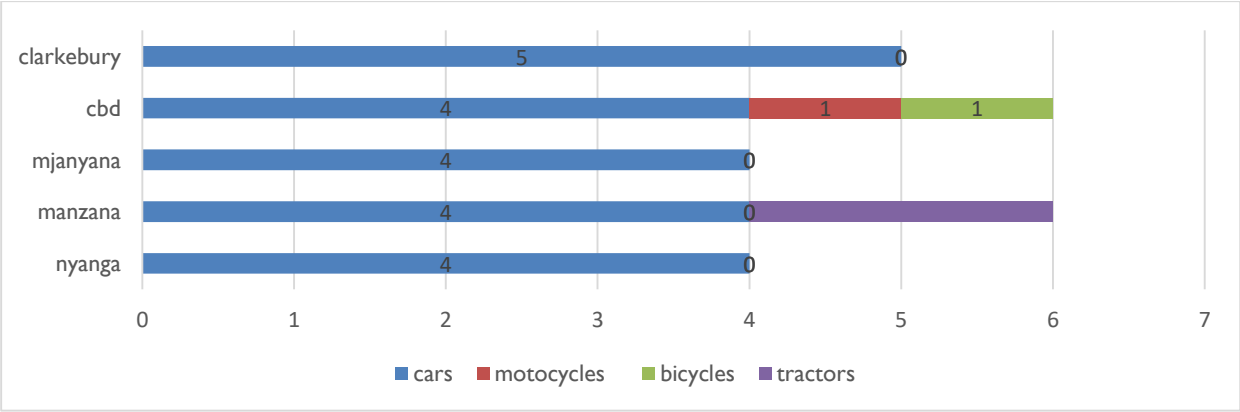


SOURCE: OWN SURVEY, 2019

Respondents have different kinds of livestock, what is interesting to note is that those closer to Ngcobo town CBD and Nyanga had least to none livestock. Clarkebury respondents had each of the livestock variety, while Manzana had all but no cattle and Mjanyana had all except donkeys and horses. This points to a possible influence in proximity to town and livestock ownership patterns.

4.2.3.3.2TRANSPORT ASSETS OWNERSHIP

Figure 23: Transport Assets Owned by Respondents

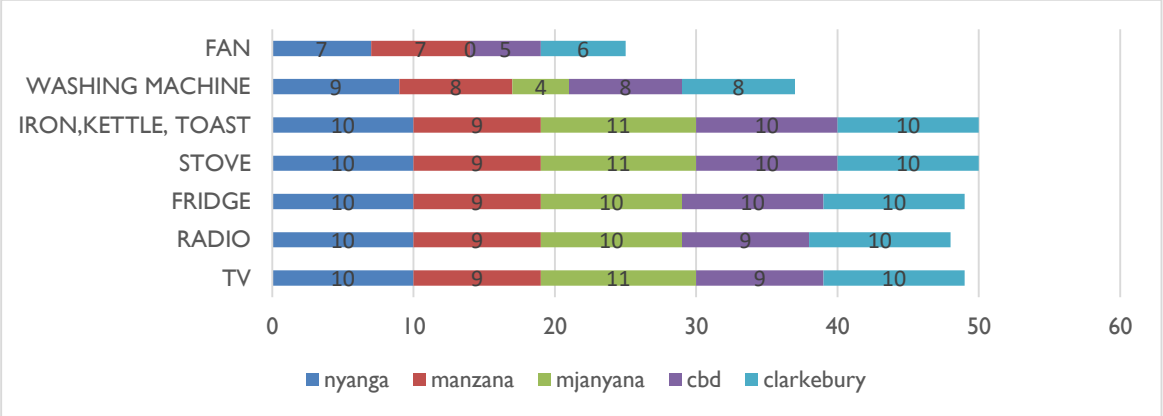


SOURCE: OWN SURVEY, 2019

Interestingly, there appears to be an exchange of asset ownership between livestock and transport related indicators, depending on whether a respondent is urban or rural based. As such, CBD had a bigger variety of transport asset ownerships including cars, motorcycle and bicycle. Respondents in the rest of the areas only had cars, with most indicating reliance on bus public transportation mode.

4.2.3.3.3 APPLIANCES AND ELECTRONICS OWNERSHIP

Figure 24:Appliances and Electronics Owned by Respondents



SOURCE: OWN SURVEY, 2019

In relation to appliances and electronics' assets, most respondents have what one may classify as basic (needs) such as iron, kettle, stove and refrigerator as compared to those appliances and electronics that can be referred to as wants such as fans and washing machines. Broken down per electronics and appliances class and region, what is glaring is the fact that those respondents that have had microfinance access tended to own the full range of appliances and electronics, while those that have never had microfinance access largely do not possess washing machines and fans.

4.3 DESCRIPTIVE STATISTICS OF REGRESSION VARIABLES

Table 3 provides a brief summary statistics of the variables which will later be used in the regression model. A total of fifty observations were made. Access refers to an instrumental variable for household access to microfinance; employment captures type of employment status of household head (where short-term = 1; and full-time employment = 2); age of household head (in years), and gender of household head (female = 1), distance refers to the closest distance to a microfinance office and highest education level of household head (0=less than Matric, 1 Matric and 2 post-Matric/tertiary qualification).

The mean score of 0.72 for the microfinance access variable indicates that most of the surveyed respondents in Ngcobo have had access to microfinance. Similarly, the mean score of 0.84 also shows the gender dominance of females in the survey. True to the age demographics which showed that most participants were in the youth age cohort, the age mean is 34 years. Employment status has a mean of 1.5, also reflective of the fact that all survey participants are employed. Distance had a mean of 30, reflective of the fact not all respondents were within close proximity to the microfinance outlet offices.

Table 3: Summary Statistics of Variables (Whole Sample)

Variable	Obs	Mean	Std. Dev.	Min	Max
Household welfare index	50	3.34	1.61	0	7
Food	50	0.4	0.49	0	1
Floor	50	0.48	0.5	0	1
Roof	50	0.48	0.5	0	1
Cooking fuel	50	0.92	0.27	0	1
Appliances	50	0.46	0.5	0	1
Livestock	50	0.16	0.37	0	1
Transport	50	0.44	0.5	0	1
Age	50	34	10.39	22	60
Employment status	50	1.5	0.51	1	2
Gender	50	0.84	0.37	0	1
Distance	50	30.5	34.34	0.6	89
Education	50	1.34	0.77	0	2
Number of Dependants	50	2.14	1.69	0	6
Access	50	0.72	0.45	0	1

Education level scored a mean of 1.34, to reflect that none of the respondents had education below Matric, but rather that on average respondents had Matric and beyond Matric. The number of dependants had a mean score of 2.14, reflective of the fact that most of the survey participants were indeed household heads. Overall, these households had an average household welfare index of 3.34, reflective of perceptions of respondents that microfinance access has somewhat led to improvements in their household welfare.

Table 4 shows the household index mean of 2.08 for those respondents that have not accessed microfinance at any given point and these fall within two specific Ngcobo villages namely Mjanyana and Clarkebury. When compared with the household welfare index of 3.34 in Table 4 above (of the total observations including the 36 households that have had access to

microfinance), it can thus be concluded that based on the higher household welfare index, accessing microfinance has had positive welfare effects.

Table 4: Summary Statistics of Variables (No Access to Microfinance)

Variable	Obs	Mean	Std. Dev.	Min	Max
Household welfare index	**14**	**2.08**	**1.07**	**0**	**7**
Food	14	0.21	0.43	0	1
Floor	14	0.29	0.5	0	1
Roof	14	0.36	0.5	0	1
Cooking fuel	14	0.86	0.27	0	1
Appliances	14	0.29	0.5	0	1
Livestock	14	0.07	0.27	0	1
Transport	14	0	0	0	0
Age	14	28.3	6.78	22	49
Employment status	14	1.2	0.43	1	2
Gender	14	0.79	0.43	0	1
Distance	14	64.5	25.42	40	89
Education	14	1.71	0.61	0	2
Number of Dependants	14	1.57	1.83	0	6

Likewise, all the mean figures of the selected variables used to denote household welfare namely food, roof, floor, appliances, transport and livestock, are all lower in Table 5, which entails exclusively descriptive statistics of variables of those households that have not benefitted in any manner from microfinance. What is also important to compare is the mean distance of 64.5 for these non-beneficiary households, as it more than doubles that of 30.5 in Table 3. This is important to note as the discussions have already alluded to a possible distance bias factor that may be a microfinance access hindrance factor.

Table 5 shows the household index mean of 3.41 for the thirty-six respondents that have accessed microfinance between 1999 and 2019 in Ngcobo villages. When compared with the household welfare index of 2.08 in Table 5 above (of the 14 households that have not had access to microfinance), it can thus be concluded that based on the higher household welfare index, accessing microfinance results is relatively better welfare effects.

Likewise, all the mean figures of the selected variables used to denote household welfare namely food, roof, floor, appliances, transport and livestock, are all lower in Table 5, which entails exclusively descriptive statistics of variables of those households that have not benefitted in any manner from microfinance. What is also important to compare is the mean distance of 64.5 for these non-beneficiary households, as it more than doubles that of 28.95 in Table 6 above. This is important to note as it yet reinforces earlier discussions alluding to distance as an access bias factor or microfinance access hindrance factor.

Table 5: Summary Statistics of Variables (Access to Microfinance)

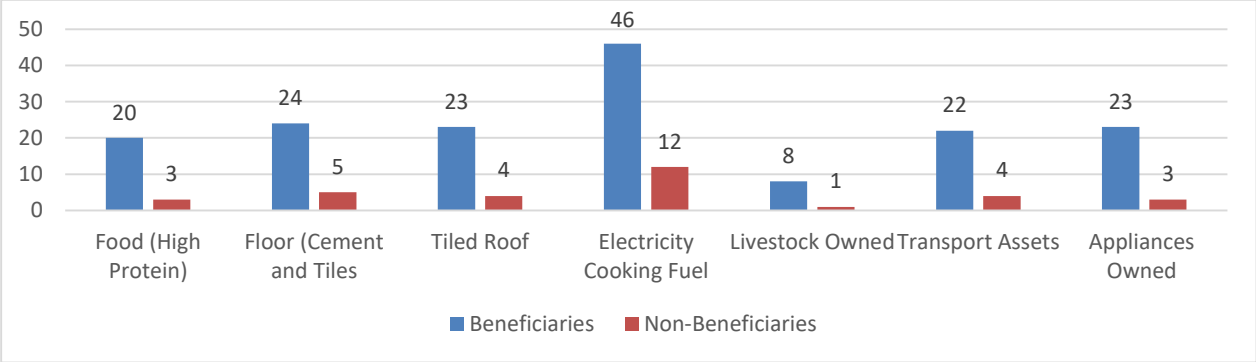
Variable	Obs	Mean	Std. Dev.	Min	Max
Household welfare index	**36**	**3.41**	**0.13**	**0**	**7**
Food	36	0.44	0.08	0	1
Floor	36	0.51	0.08	0	1
Roof	36	0.49	0.08	0	1
Cooking fuel	36	0.93	0.04	0	1
Appliances	36	0.44	0.5	0	1
Livestock	36	0.16	0.02	0	1
Transport	36	0.44	0.08	0	1
Age	36	34.53	1.62	22	60
Employment status	36	1.56	0.08	1	2
Gender	36	0.86	0.05	0	1
Distance	36	28.95	15.62	0.6	89
Education	36	1.28	0.12	0	2
Number of Dependants	36	2.16	0.25	0	6

4.3.2 COMPARING HOUSEHOLD WELFARE USING SIX VARIABLES BETWEEN MICROFINANCE BENEFICIARIES AND NON-BENEFICIARIES

Figure 25below shows that microfinance beneficiaries generally have higher household welfare than non-beneficiaries. This is true of all the selected household welfare variables used to measure welfare namely food patterns, flooring and roof materials of main dwellings, ownership of and household appliances. The only exception in respect to household welfare differences between beneficiaries and non-beneficiaries was cooking fuel used and livestock as well as transport asset ownership patterns.

In relation to cooking fuel used by respondents, there were other factors at play, beyond access to microfinance that influences the type of cooking fuel used in these respective households. A specific point in case is that cooking fuel was just largely underpinned by electricity service delivery levels. In relation to livestock and transport ownership patterns, proximity to town seemed to influence preferences towards transport than livestock assets. The contrary was true in that those in rural villages owned more livestock than transport assets. Nevertheless, a glaring finding remains that those that have had access to microfinance over time displayed relatively better household welfare.

Figure 25: Comparison of Household Welfare for Microfinance Beneficiaries and Non-Beneficiaries



SOURCE: OWN SURVEY, 2019

Respondents who have benefited from microfinance initiatives over time, indicated that they consumed high protein diets, with their main dwelling houses having tiled roofs and cement and tiled floors, using electricity as the cooking fuel as well as having higher asset ownerships (livestock, transport assets and household appliances and electronics). While the results show that microfinance beneficiaries generally tend to have higher welfare; however, a general conclusion cannot be that higher welfare is purely a function of microfinance access. There are other qualitative issues at play, such as the cooking fuel used by respondents largely being a function of service delivery. This is where regression results become significant to provide further clarity and links to microfinance access and household welfare.

If one were to consider Figure 25 as well as Tables 4 and 5, a conclusive observation would be that using the seven selected household welfare variables, those households that have had microfinance access in Ngcobo villages seem to display better household welfare than those households that have never been microfinance beneficiaries over the reviewed time period.

4.4 CORRELATION RESULTS

A simple correlation matrix of the variables indicates that microfinance access was more correlated with household's variables such as higher levels of employment or long-term employment, household head age, and the number of household dependents. Far from targeting the very poor, these simple descriptive statistics indicate that our sampled microfinance initiatives may have served to target those households that have a predominantly low risk profile when it comes to loan repayments. Employment and age can be good determinants of individual or household risk in terms of loan repayments, which may in actual fact seem to contravene the policy intentions for introduction of the programme in South Africa. In contrast, microfinance is negatively correlated with distance to microfinance outlet and household poverty. Put differently, the closer a household is from a microfinance outlet, the better its microfinance access and lower its poverty. However, a better assessment of the programme's impact is only feasible through some form of regression analysis and estimation.

Table 6: Correlation Matrix

	1	2	3	4	5	6	7	8
1 .Household Welfare Index Measure	1							
2. Access to microfinance	0.3866	1						
3. Employment status	0.3215	0.3563	1					
4. Age of household head	0.5129	0.3465	0.5562	1				
5. Household Head Gender (F=1, M=0)	-0.1451	0.0923	-0.1091	-0.0318	1			
6. Number of household dependants	0.3891	0.2119	0.2032	0.4114	-0.2895	1		
7. Distance to nearest microfinance office	-0.4101	-0.6238	-0.1496	-0.4631	0.0151	-0.3158	1	
8. Household Poverty	-0.7781	-0.3675	-0.1667	-0.4740	-0.1273	-0.3366	0.3741	1

SOURCE: ESTIMATE FROM RESEARCH DATA

4.5 REGRESSION RESULTS

The main interest of the research is in finding unbiased coefficient estimates for the microfinance participation variable taking into account possible self-selection bias. Table 8 reports probit and ordinary least squares (OLS) estimates of the impact of microfinance access

on household welfare and the likelihood that a household will be in poverty (i.e. if household welfare index less than 3), assuming that access to microfinance is not jointly determined with the outcome variable of interest.

Table 7: Estimated Impact of Microfinance on Household Welfare

	OLS		Probit	
Dependant variable	**Household Welfare Measure**		**Household Poverty Indicator -Poor (=1, if welfare measure<=3)**	
	Model 1	*Model 2*	*Model 1*	*Model 2*
	Coef. (SE)	*Coef. (SE)*	*Coef. (SE)*	*Coef. (SE)*
Microfinance Access	1.18 (0.4) ****	0.82 (0.43)**	-1.04 (0.41)**	-2.27 (1.44)**
Household Head Age		0.05 (0.02)***		-0.22 (0.03)**
Number of Household Dependents		0.13 (0.12)		-0.66 (0.14)
Employment status		-0.09 (0.42)		-0.28 (0.56)
Education		0.16 (0.23)		-0.85 (0.29)
Gender		-0.41 (0.49)		0.70 (0.61)
Constant	2.07 (0.34)****	0.5 (0.85)	0.366 (0.34) ***	3.3 (1.40)***
F-stat	8.43****	4.07****	LR chi2 = 6.60***	LR chi2 = 13.34***
R-squared (Adj. R-squared)	0.15 (0.13)	0.3622 (0.2732)	Pseudo R Squared = 0.10	Pseudo R Squared = 0.22

Note: Significance levels: **** =< 0.01; *** =< 0.05; **=<0.1;

SOURCE: ESTIMATE FROM RESEARCH DATA

Models 1 and 2 compare a simple and an expanded linear regression specification models. In OLS model 1microfinance access is the only included independent variable to explain household welfare (with no included control variables), and it can be observed that access has a highly significant positive impact on household welfare index. The coefficient of microfinance access is 1.18 and is positively related to household welfare measure. Furthermore, the joint explanatory power for model 1 (measured by the R-square) indicates that 15% of the variation in household welfare (as the dependant variable) is explained by the independent variable (microfinance access). As such, the overall model significance (measured by F-test) for Model 1 is statistically significant at 1%. Keller (2014) denotes that to test the validity of significance of the model, the joint null hypothesis of the F-test is that all the coefficients of the model are zero and the alternate hypothesis is that at least one of the coefficients is more than zero. Using the OLS estimates, the joint null hypothesis was therefore rejected at 1% significance level.

The observed direct relationship between microfinance access and household welfare and the significance of the impact corroborates literature. Amongst others, Abdullah (2010) and 2012 examined whether participation in Malaysia microcredit program improved the quality of life by using a quality of life index which comprised of eleven indicators. Both studies provided

evidence of the positive relationship between microfinance access and improved quality of life of poor rural households in Malaysia as participant respondents lived in bigger and better houses, used permanent housing materials, used environmentally safe cooking fuel, enjoyed healthy toilet facilities, and owned refrigerators, washing machines and televisions, more than in the case of non-participants.

Similarly, the present study OLS Model 1 results show that microfinance access has a significantly positive impact on household welfare in Ngcobo villages. In this specific case, household welfare measure in Ngcobo villages manifests in access to high protein food, type of household floor covering, roof type, form of cooking fuel, ownership of transport assets, critical household appliances, livestock ownership for microfinance participants than non-participants.

To assess impact of microfinance access on household poverty, a probit specification is also reported, to model the variable outcome (household poverty (poor) or not). For the binary outcome variable, all those households with household welfare measure 3 and above are non-poor, while those below 3 are poor. From Probit 1 model (which excluded any predictors), the interest is in whether microfinance access influences the likelihood of a household being in poverty (that is poor) or not. It can be observed that the co-efficient is 1.04 and has an indirect relationship with household poverty. In other words, it is unlikely for a household to be in poverty (poor) if it has had microfinance access. It can also be observed from the pseudo R squared that 10% of the variation in household poverty is explained by microfinance access. Overall, the likelihood ratio chi square (LR chi square) shows that our Probit Model 1 is highly significant at 5%.

A negative relationship between microfinance access and household poverty was expected. Hashemi (1996), Versluvysen (1999), Morduch (2000), Littlefield et al. (20003), Morduch et al. (2005) and Van Rooyen et al. (2012) found that access to microfinance has positive impact on household income useful in poverty reduction and household well-being at different levels. Probit Model 1 supports these, by finding that households in Ngcobo villages are less likely to be in poverty (poor) with access to microfinance.

In OLS Model 2, both independent (microfinance access) and control variables (age, number of dependants, employment status, education and gender) are included to explain household welfare. Again, it can be observed that microfinance access coefficient is 0.82 and is positively

related to the household welfare measure. However, although still significant, it can be observed that significance of microfinance access is reduced at 5% level. Therefore, as for our measure of household welfare, access to microfinance is statistically significant.

From the control variables, age, number of dependants and education coefficients were 0.05, 0.13 and 0.16 respectively and as expected, these variables all positively related with household welfare. The other two control variables, employment status and gender were negatively related with household welfare. However, these control variables were insignificant. Nevertheless, addition of control variables in Model 2 helps to improve overall model's explanatory power (R-squared) and overall significance of the model. As it can now be observed in Model 2 that 36% of the variation in household welfare (as the dependant variable) is explained by the independent and control variables. Measured by the F-test, model 2 also shows that the model is statistically significant at 1%.

In Probit Model 2, age, number of dependants, employment status, education and gender were included as the predictor variables to help explain household poverty (poor). Except for gender, it can be observed that all the co-efficients have indirect relationship with household poverty. In other words, a household is most likely to be in poverty (poor) if it lacks access to microfinance, has a young household head, has a bigger household, has a higher employment status and better education levels. It can also be observed that adding the predictor variables improves the model pseudo R squared, as now 22% of the variation in household poverty is explained by microfinance access and these added predictor variables. Overall, the likelihood ratio chi square (LR chi square) also increased for a better model fit of Probit Model 2 at 5% significance. The joint null hypothesis of the LR Chi square test is that all the parameters including the co-efficients of the model are zero and the alternate hypothesis is that one or all the parameters or coefficients are more than zero. The joint null hypothesis was therefore rejected at 5% significance level.

The observed direction of relationships between household welfare and control variables in OSL model 2, as well as the inverse relationship between household poverty and specific predictor variables (young household head, bigger household size, lack of education and employment) in Probit Model 2, were largely expected. Bonsal (2011) and Aun et al. (2006) proved that the older the household head, the more their microfinance access increases and the better their household welfare. Education is commonly used as a control variable in similar household welfare tests and the rationale Coleman (1999) and Bae et al. (2012) found that education is a form of human capital and therefore the higher the education level of a

household head, the lower the risks of a household falling into poverty. Awan et al. (20011), Morrisson (2002) and Herber (2002) emphasise that education has a proven positive impact on poverty, a positive correlation with income and therefore also welfare.

Bekeryte (2013) and Ukpere et Al. (2009) found that employment status variable is useful as the higher the employment status of a household head, the higher the household welfare. Probit 2 Model supports literature as a lack of employment increases the likelihood of households in Ngcobo villages to be in poverty (poor). However, the negative employment status coefficient of 0.09 observed in the OLS Model 2 was unexpected.

The effect of household size (number of dependants) is ambiguous in literature and some findings point out that household size's effect on household welfare depends on the composition of household members. Nevertheless, our observation is that in OLS Model this control variable has a positive insignificant relationship with household welfare, while it has a negative insignificant relationship with household poverty in Probit Model 2.

Evidence by Garikipati (2008) proved that lending to women strengthens the household as a whole by improving the household's ability to cope with various vulnerabilities. Based on these, the assumption was that both employment status and gender would have a direct relationship with household welfare. In Probit Model 2 gender reduces the likelihood of being in poverty as expected. However, in OLS Model 2 gender had a negative 0.41 coefficient which was also unexpected, but results still showed that while this relationship was indirect, it was nonetheless insignificant.

Table 8: Average Marginal Effects

Average marginal effects Model VCE : OIM			Number of observations = 50		
Expression : Pr (hh_poverty2), predict ( ) dy/dx w.r.t. : MicroFin_Assignment emp_status					
	Delta Method				
	dy/dx	Std. Error	z	P>|z|	[95% Conf. Interval]
MicroFin_Assignment	-.5823403	.2447413	-2.38	0.017	-1.062024 -.1026561
Emp_Status	-.1796871	.1082634	-1.66	0.097	-.3918794 .0325053

SOURCE: ESTIMATE FROM RESEARCH DATA

A simple OLS estimation is inappropriate in the presence of possible sample selection bias and or endogenous variables. See Appendix A for an attached table that reports results of a two-stage regression estimation, which attempts to correct for these possible estimation biases

through instrumental variables (IV) estimation. Appendix A also provides instrumental variable estimation which is based on the participation regression.

Table 9 above reports the average marginal effects of access to microfinance and employment status on the probability of a household being poor. Based on the sampled households access to microfinance reduces the average probability of being poor by -0.58 percentage points for each sampled household, which indicates significant household welfare (socio-economic) impact.

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The overall objective of the study was to establish whether access to microfinance has an impact on household welfare in five administrative areas under Ngcobo region within the Eastern Cape Province. This chapter summarises research findings, concludes and recommends based on the same.

5.2 SUMMARY

Chapter one provided context on microfinance and its adoption in South Africa post 1994as a poverty eradication, inclusive economic growth and development policy intervention tool. A cause for concern was that despite growth of the sector beyond R50 billion by 2013, poverty gap and headcount intensified, specifically placing Ngcobo local municipality second and third highest in terms of poverty gap and headcount in 2016, within the Eastern Cape. Further to this, the dearth in research on impact of microfinance particularly in rural context; non-conclusiveness and contradictions in currently existing empirical literature, steered towards identification of a research need. Proposed research question was whether microfinance access has had any household welfare impact of selected sample of households in Ngcobo. And if not, what have been challenges to effectiveness of microfinance initiatives.

Chapter two proceeded to discuss the research area socio-economic indicators including population dynamics, levels of education, poverty gap and intensity, labour market trends and economic size Ngcobo, to contextualise and give background on Ngcobo, the research setting. This was done in order to give perspective for why microfinance effectiveness is such a need in the region. An important highlight of this chapter was outlining evolution of microfinance, its earlier policy intentions and adaptations over time that led to overall three models or approaches to establishing microfinance institutions.

Institutionists' stressed self-sufficiency or sustainability as crucial, welfarists' in contrast pointed out outreach and poverty alleviation as fundamental, while the emergent approach, poverty alleviation leans more towards welfarists but further stresses household livelihood importance in addition to sustainability. Further, and more importantly, literature review presented an all-inclusive food, dwelling and assets impact assessment tool that would be used to assess effectiveness of microfinance in Ngcobo households' welfare. Lastly, currently existing literature review on microfinance and its effectiveness in Africa and Asia wasalso provided. What was a clear standpoint of literature review being a need for more research to

fill the gap, and provide some more conclusive evidence of usefulness of microfinance in especially African and rural settings.

Chapter three on methodology outlined with justifications, the research design, sources and type of data, population and sampling, data collection, questionnaire design, data analysing as well as definition and measurement of variables. A quantitative, descriptive research approach was undertaken that included a household survey to a randomly selected fifty households across five regions in Ngcobo, namely Nyanga, Manzana, Mjanyana, Ngcobo CBD and Clarkebury. The questionnaire was physically administered which resulted in 100% response rate.

Chapter Four discussed demographic profiles of respondents, descriptive statistics, correlation analysis and regression results. Descriptive statistics showed that most microfinance institutions participants in Ngcobo were female, with full time employment, tertiary education levels and all within close proximity to microfinance institutions. Majority of respondent accessed loans, making this product the most popular compared to savings (stokvels) and micro-insurance. A common finding, even with different levels of elaboration was that access to microfinance does have an impact to some measure on household welfare of those households that have since benefited from the microfinance outlets in Ngcobo.

5.3 CONCLUSION

Of the fifty surveyed households, 36have had access to microfinance products and services between 2009 and 2019. Most of the respondents who were either once off or regular microfinance participants, indicated that they most accessed microfinance loans. Although the amounts of loans accessed varied based on the reasons for borrowing, what was a clear observation was that majority of respondents borrowed for house renovations and general expenses such as buying furniture and household appliances. Other reasons for borrowing, such as covering education fees and tuition, footing hospital bills and so on, corroborated existing literature on how microfinance improves household welfare.

Seven variables were chosen to assess household welfare namely food consumption patterns, roof material of the main dwelling, floor material of the main dwelling, main cooking fuel, livestock, transport and household appliances and electronics asset ownership patterns. A simple comparison clearly showed that those households that have had never accessed

microfinance in Ngcobo had relatively lower household welfare compared to those that have had access over a time period. This was demonstrated in carbohydrate high diets, less durable materials used for roofing and flooring main dwellings, asset ownership patterns (livestock, transport and household appliances). The resultant factor being a lower household index for those households that have never benefitted from microfinance programme, compared to the rest that have since accessed microfinance.

Furthermore, correlation analysis was conducted to establish which independent variables had what association with the dependent variable. Correlation results showed that access was more correlated with household variables of employment status, age and number of dependents. Regression results equally showed the importance of employment status, household asset base and gender as important determinants of microfinance access. In addition to these, regression results showed that household distance from microfinance institutions also plays a significant role in easing or prohibiting microfinance access.

In estimating the impact of microfinance access using only access as the main variable to assess impact, the estimated welfare effect of microfinance was highly significant, generating a positive impact. Further, when household poverty indicator was used as household measure, impact of microfinance remained significantly high, even when other variables besides access were included in the regression. To be explicit, access to microfinance was found to reduce a likelihood of a household from being poor by 58%.

A few challenges that may be reason for limited effectiveness of microfinance in Ngcobo were identified. The first one is the fact that distance of a household from a microfinance outlet or institutions plays a significant role in microfinance access. In other words, those households in Mjanyana and Clarkebury which are over 40 kilometres away from the microfinance institutions have invariably had lower microfinance access. Secondly, importance of such variables as full time employment status, age of respondent and sizes of their households as a risk buffer on loan repayments suggests that practise contravenes the intended objectives of microfinance programme in Ngcobo. This necessitates that the programme be reviewed to ensure that it assists the intended beneficiaries, more as the study has shown that microfinance access has had positive effect on household welfare in Ngcobo villages.

5.4 RECOMMENDATIONS

Current practise that shows qualitative issues such as employment, age, assets and other variables interfere with access to microfinance to the detriment of those intended beneficiaries of the microfinance programme. This requires attention of policy makers in ensuring that policy is refined to close such gaps. Also, distance as a bias factor towards access to microfinance also spells for need for policy makers and microfinance institutions to come up with innovative ways of ensuring those in deep rural areas are given the same opportunities to access microfinance within Ngcobo.

5.5 FURTHER RESEARCH

While there is research on microfinance, there still exists opportunities to expand this in Africa, South Africa and rural provinces such as Eastern Cape as currently there is not enough empirical literature on microfinance or its impact. Key research areas identified are:

- ✓ Are microfinance initiatives reaching the intended beneficiaries, the so called poorest of the poor?
- ✓ What technology innovations can be introduced by MFIs in the wake of 4IR, for better reach of MFI initiatives particularly to those deep rural areas of South Africa?

5.6 RESEARCH LIMITATIONS

The intention was for research to use both primary and secondary data. Ideally, financial statements were identified as crucial for extraction of specific secondary data variables deemed crucial for the research study included types of offerings, number of borrowers, value of loan portfolios, number of savers and reach of each institution. This information would then reveal the general accessibility (outreach) and participation of households in and around Ngcobo on the microfinance offerings of a specific microfinance institution identified as instrumental for the impact case study. However, despite several attempts made to get the managers of microfinance institutions to participate in the survey, there was reluctance to participate meaningfully and divulge the required information. Furthermore, the subscription data was not disaggregated for the Eastern Cape, and it was outdated data, last updated in 2013. It can thus be concluded that secondary data constraint was a significant research limitation, which nonetheless did not deter attainment of research objectives.

In as far as primary research is concerned, the major limitation was getting income related information from respondents. Despite confidentiality and anonymity assurances, majority of respondents felt uncomfortable with divulging their income before and after microfinance access.

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7 Appendix A Participation Equation

Probit regression — Number of obs = 50
LR chi2(1) = 20.23
Prob > chi2 = 0.0000
Log likelihood = -19.530602 — Pseudo R2 = 0.3412

microfin	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
distance	-.027323	.0066935	-4.08	0.000	-.040442	-.0142039
_cons	1.64632	.3712097	4.44	0.000	.9187619	2.373877

Instrumental Variable Estimation

Dependant variable	**Household Welfare Index**		**Household Poverty Dummy**		
	Model 1	Model 2	Model 3	Model 4	Model 5
	Coef. (SE)	Coef. (SE)	Coef. (SE)	Coef.(SE)	Coef. (SE)
Instrument (Micro Finance Access)	***2.00**** ***(0.64)***	***1.11**** ***(0.73)***	***-2.28 **** ***(1.02)***	***-1.95 **** ***(1.2)***	***-2.08 **** ***(1.00)***
Household Head Age		0.04 ** (0.02)		-0.02 (0.03)	
Number of Household Dependents		0.14 (0.12)		-0.08 (0.14)	
Employment		0.20 (0.42)		-0.24 (0.55)	-0.64 * (0.42)
Education		0.13 (0.24)		-0.08 (0.29)	
Gender		-0.28 (0.5)		0.7 (0.6)	
Constant	1.5 *** (0.5)	0.4 (0.9)	2.36 **** (0.87)	2.73*** (1.27)	2.56 **** (0.86)
F - stat		3.76****			

LR chi2(6)		***
R-squared (Adj. R-squared)	0.34 (0.25)	
Pseudo R- squared		0.22

Notes: **Poor =1, if welfare measure<=3;** *Significance levels: **** =< 0.01; ** =< 0.05; *=<0.1*
Source: Estimate from Research data

Appendix B: QUESTIONNAIRE

May, 2019	EFFECTIVENESS OF MICROFINANCE IN IMPROVING HOUSEHOLD WELFARE OF HOUSEHOLDS IN NGCOBO IN THE EASTERN CAPE

INTRODUCTION AND COVER PAGE:

Hello, my name is Sihle Nkungwana and I am conducting research for a mini thesis required in partial fulfilment of the requirements for the degree of Master of Commerce in Development Finance in the University of Cape Town Graduate School of Business.

My topic seeks to assess whether households that have had microfinance access in Ngcobo villages have had improvements in welfare. Specific areas of interest include getting general information on microfinance access, the reasons for accessing microfinance, whether microfinance access was once off or regular. Furthermore, the paper is interested in knowing what areas of household welfare were affected or improved by microfinance access such as food consumption patterns, roofing, tiling and flooring of main dwelling, type of fuel used to cook and ownership of assets and household appliances/electronic.

I therefore kindly request that you complete the following questionnaire or allow me to complete it for you if you so wish. The questionnaire will require approximately 30 minutes to complete. There is no compensation for responding nor is there any known risk. In order to ensure that all information will remain confidential, please do not include your name.

Once again, may you be reassured that **your individual answers will be kept confidential. Should you so wish, you may contact my Supervisor, Dr Latif Alhassan at 071 849 1066.**

PART 1: DEMOGRAPHIC INFORMATION & PROFILE

This information will be kept strictly confidential and will only be used if clarification is needed.

Name of respondent	
Age	
Home Language	
Marital Status	
Employment Status	
Preferred Language for Questionnaire Administration	
Number of Dependents	
Total number in a household	
Role in the household	
MFI Product/ Service Details	
Amount	
What it was spent on?	

MFI Client status (once-off, regular etc)	

May, 2019	EFFECTIVENESS OF MICROFINANCE IN IMPROVING HOUSEHOLD WELFARE OF HOUSEHOLDS IN NGCOBO IN THE EASTERN CAPE

PART 2: ADULT MEMBER'S PROFILE OF HOUSEHOLD (18 and over)

Name	Relation to Respondent	Gender	Age	Level of Schooling	Can Write	Occupation	MFI client status	Details of MFI product or service	Typical Consumption basket (Monthly)

PART 3: FOOD RELATED INDICATORS

3.1 How many meals are served in the household daily?

3.2 Kindly indicate how many days the following foods are served in a week?

Porridge/Cereal	
Samp	
Rice	
Bread	
Pap	
Egg	
Margarine	
Jam	
Peanut Butter	
Umvubo	
Canned Proteins	
Meat, Chicken or Fish	
Vegetables	
Fruit	
Dairy	
Other (specify)	

3.3 How often do you purchase each of the following items in a month?

Porridge/Cereal	
Samp	
Rice	
Bread	
Pap	
Egg	
Margarine	
Jam	
Peanut Butter	
Umvubo	
Canned Proteins	
Meat, Chicken or Fish	
Vegetables	
Fruit	
Other (specify)	

PART 4: DWELLING RELATED INDICATORS

	Tarpaulin, plastic sheets, branches and twigs	grass	Stone or slate	Iron sheets	Brick tiles	concrete	dirt	wood	cement	Cement and tiling	Tenant, communal land, own land
How many houses/compounds											
How many room each?											
What type of roofing material is used in the main house?											
What type of exterior walls does a dwelling have? What type of flooring does a dwelling have											
What is the tenure status											
What is electricity supply?											
What type of cooking fuel source is primarily used?											
What is source of drinking water?											
What type of toilet facility is available?											

PART 5: ASSET-BASED INDICATORS

Asset Type			
Livestock			
Cattle			
Sheep, goats, pigs			

Poultry			
Horses and Donkeys			
Transport related			
Cars			
Motorcycles			
Bicycles			
Tractors			
Other			
Appliances and Electronics			
TV			
Radio			
Refrigerator			
Stove			
Iron, kettle, toast			
Washing machine			
Fan			

THANK YOU FOR PARTICIPATING IN THIS SURVEY